English for
Information Technology

2

Vocational English
Course Book

David Hill
Series editor David Bonamy

A2-B1

CD-ROM

ALWAYS LEARNING

PEARSON

English for
Information Technology

2

Vocational English
Course Book

TANITIM NÜSHASIDIR
PARA İLE SATILMAZ

David Hill

Series editor David Bonamy

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1 Working in IT

- describe IT-related jobs and dutie
- talk about what IT companies do
- discuss IT workplace rules
- make suggestions, agree and disag

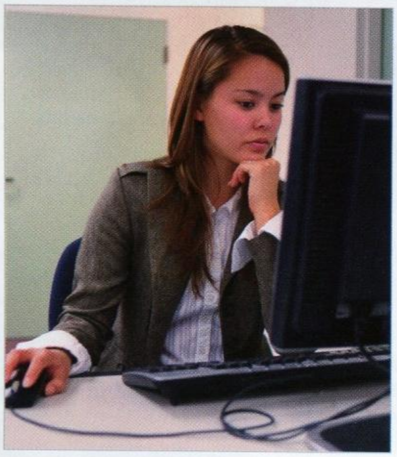
IT jobs and duties

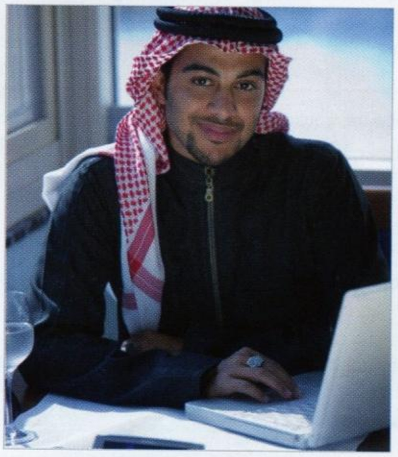
Speaking 1 Work in pairs or small groups. Discuss these questions.

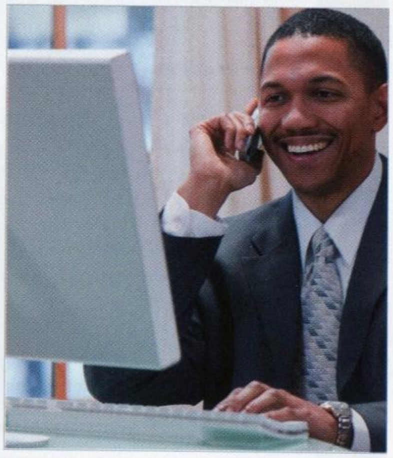
1 How do you use IT? Think about work, study and fun.
2 What devices do you use?
3 What software do you use?

Listening 2 02 Listen to six people introducing themselves. What jobs do they do? Complete the sentences. Then compare answers with a partner.

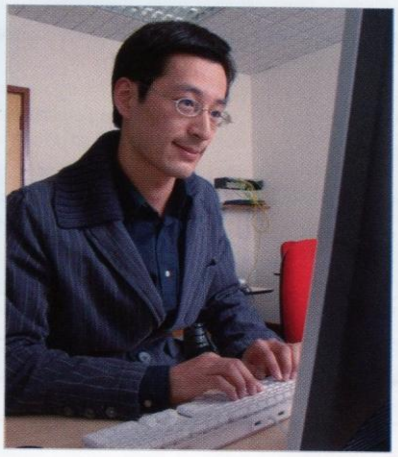
database administrator
helpdesk supervisor
project manager
software developer
support technician
systems analyst

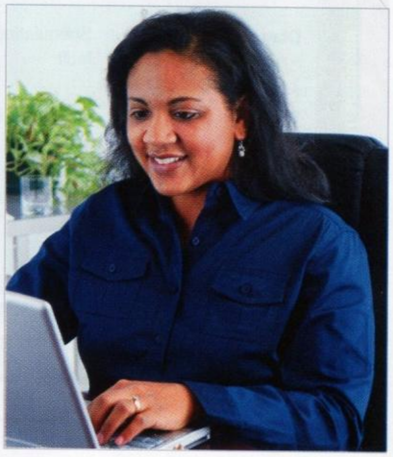

1 Maria is a ________


2 Ahmed is a ________


3 Freddy is a ________

4 Hana is a ________


5 Tim is a ________


6 Sophie is a ________

3 Listen again. Complete these collocations.

write *software*
1 supervise ______
2 have ______
3 be responsible ______ IT projects
4 look ______ computers
5 install ______
6 diagnose ______
7 design ______
8 maintain ______
9 write ______ for software

Pronunciation

4 Work in pairs or small groups. Underline the stressed syllables in the collocations in 3. Listen to track 02 again and check your answers. Then practise saying the collocations with the correct stress.

Vocabulary

5 Work in pairs. How many new collocations can you make with the verbs in 3?

be responsible for a department

Speaking

6 Work in pairs. What does each person in 2 do in their job? Use the collocations in 3.

An IT project manager is responsible for IT projects.

7 Work in small groups. List any other IT jobs you can think of. What do people in these jobs do? Which jobs would/wouldn't you like to do? Why?

Listening

8 03 Listen to an IT employee telling his new manager about his job. What do you think his job is?

9 Listen again. Tick ✓ the things that usually happen.

1 ☐ Robert checks emails.
2 ☐ Robert has emails waiting for him.
3 ☐ Robert visits people at their desks.
4 ☐ Sales people have problems.
5 ☐ Robert attends meetings.
6 ☐ Robert visits other companies.

10 Listen again. Write these phrases in the correct place in the sentences in 9.

from time to time   generally   hardly ever   normally
occasionally   usually

Language

Expressing frequency

Adverbs of frequency (*usually*, *sometimes*, *hardly ever*, etc.) normally go before the main verb. Some adverbs (e.g. *sometimes*, *occasionally*, *normally*) can also go at the beginning or end of a sentence.	*Zafia* ***almost always*** *checks her email first thing in the morning.* *I have to call a support technician* ***occasionally****.*
Time expressions (*once a week*, *from time to time*, *all the time*, etc.) go at the beginning or end of the sentence.	*Pawel takes training courses* ***two or three times a year****.*

Speaking

11 Work in pairs. Choose a job from 2. Then take turns to interview your partner about his/her job.

Tell me about your current job. What are your duties? How often do you ...?

IT organisations

Speaking **1** Work in pairs. Choose a technology company and list activities the company carries out.

Vocabulary **2** Read the company profiles and find words that match these definitions.

1 a company or companies that sell things (Futachiba) ________, ________
2 companies that make things to sell (Futachiba) ________
3 factories (Futachiba) ________
4 things a company sells (Futachiba) ________
5 using software that runs and stores information on the internet (IBGroup) ________
6 customers (IBGroup) ________
7 start selling a new product (Digital World) ________

Futachiba

Futachiba is a leading international provider of computer hardware. The company is among the top five suppliers internationally of servers and among the top ten manufacturers of laptop computers. We have production facilities in six countries and we sell our products to almost every country in the world. With service centres in all our major markets, we provide a very high level of customer service.

IBGroup

We are a fast-growing private company that supplies cloud computing services internationally. Our products include online office applications such as word processing, spreadsheet, presentation and database programs, which people can use on the internet anywhere and at any time. Our clients include major corporations, as well as many small and medium-sized companies.

War of the Suns
II

Digital World

At Digital World we proudly design the most popular games in the world! We are excited every day by the great feedback we get from our favourite people: our game-playing customers. You can play our award-winning games on all the major computer operating systems, including Windows and Mac OS. Many of them are also available for Apple iOS and Android. Our wonderful staff started developing games in 2005 and continue to work on new, highly entertaining products. We expect to launch the next version of our biggest game, *War of the Suns*, next month.

Reading **3** Read the company profiles in 2 again and answer these questions. Then compare answers with a partner.

Which company or companies:

1 is getting bigger? ________
2 develops software? ________, ________
3 makes things in more than one country? ________
4 has a new product to launch? ________
5 sells software for use on the internet? ________

4 Work in pairs. Underline five types of software in the company profiles in 2. Then think of examples of each. What might people use them for?

Speaking **5** Work in small groups. Think of real IT organisations such as Apple and Google. Which would you prefer to work for? Why?

Listening **6** 04 Work in pairs. Complete this conversation between two people from different IT companies using the words in brackets. Then listen and check your answers.

A: So (1) ______________________ (your company)?
B: Well, we mostly develop apps for Apple and Android devices – iPhones, that kind of thing.
A: And (2) ______________________ (your customers)?
B: Mm ... they could be anyone, really. For example, many are companies, wanting an app to show their products. We also do a lot of work for educational organisations. They often want apps to help people learn something.
A: (3) ______________________ (produce any hardware)?
B: No, that's a very different field. All our products are software. But we do work closely with hardware manufacturers to make sure our software works well.
A: And (4) ______________________ (future plans)?
B: Good question! We have a product launch tomorrow night. (5) ______________________ (want/come)?

Speaking **7** What is a product launch? Why are product launches a good idea? Which companies hold big product launches? What kind of events do they hold?

Language

Present simple questions

To form **present simple questions**, we use *do/does* + subject + main verb. If there is a question word in the question (*who*, *what*, *when*, *how*, etc.), it always comes at the beginning.	***Does*** *this software* ***work*** *on iPhones?* *How often* ***do*** *you* ***update*** *the software?*
For *Yes/No* questions (questions we can answer with 'yes' or 'no'), we use rising (↗) intonation. For questions that begin with a question word, we use falling (↘) intonation.	*Do you work with small companies?* (↗) *How do I use this software?* (↘)

Pronunciation **8** Listen to track 04 again. Mark the intonation on the questions as rising (↗) or falling (↘). Then practise saying the questions with a partner.

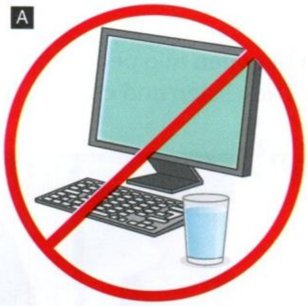
Writing **9** You are preparing a magazine article about local IT companies. Write at least six questions for a questionnaire to find out what each company does.

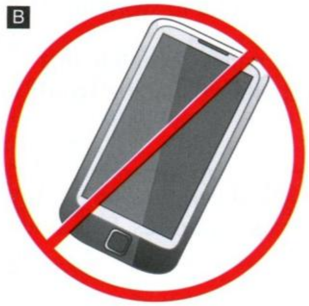
Speaking **10** Think of answers to the questionnaire in 9 for a company you know or an imaginary company. Then work in pairs. Take turns to ask and answer the questions in your questionnaire. Repeat with a new partner.

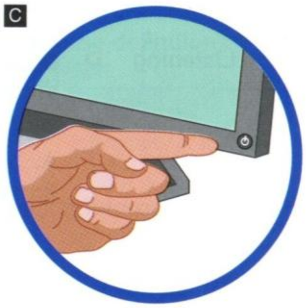
11 Work in groups. Choose a company from 2 each. Take turns to ask questions to find out which company each student in your group has chosen. Use appropriate intonation.

IT workplace rules

Speaking 1 Work in pairs or small groups. Look at these signs. What are the rules?

A


B


C


2 Do you have any of the rules in 1 in your workplace or college? Do you think they are good rules or bad rules? Why?

Vocabulary 3 Read the memo and find words that match these definitions. Then compare answers with a partner.

1 person in charge of IT ________
2 keeping something safe ________
3 information such as numbers and details about people ________
4 a secret word that you type into a computer before you can use it ________
5 a group of connected computers ________
6 having only letters and numbers ________
7 letters, numbers, punctuation marks, etc. ________
8 people you work with ________

FROM: Chief Information Officer
TO: All staff
DATE: 16 June
SUBJECT: IT security

XBM Digital

As you know, many new staff have joined us at XBM Digital recently, so now is a good time for a reminder about some of our rules. Security is important, and these rules will help us to keep our IT systems and data secure.

Firstly, passwords are important for keeping the network secure. Don't use common words or numbers as passwords, such as birthdays or names of your children. Passwords must be alphanumeric and be at least eight characters long. You need to change your password every month or more frequently. Also, you should not share it with anyone, including your colleagues.

Language 4 Read the memo in 3 again and underline the words used to express rules.

Rules

We use ***must***, ***mustn't*** and ***have to*** to show strong obligation and to express rules. We can also use ***should***, ***shouldn't***, ***can't*** and ***need to*** to talk about rules.	*Passwords* ***must*** *be at least eight characters long.* *I* ***have to*** *go to the canteen to eat! I* ***can't*** *even have an apple at my desk!*
We also use **imperatives** to give rules. Use them carefully because they can sound impolite.	***Keep*** *your password secret.* ***Don't share*** *your password with other people.*

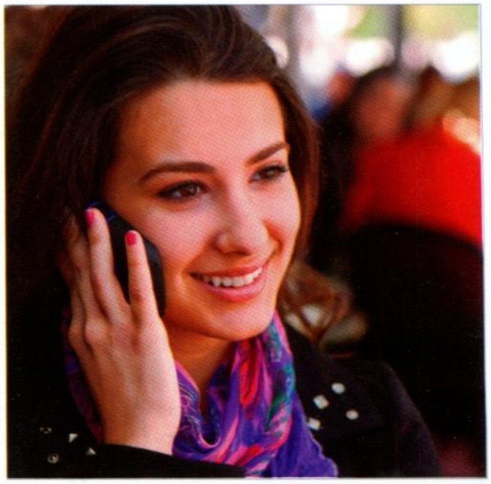
Speaking **5** Work in pairs or small groups. Write workplace rules for some of these activities. Then compare answers with another pair or group. What reasons can you think of for each rule?

- installing new software
- connecting personal devices to company computers
- playing computer games
- using social networking sites such as Facebook
- using mobile phones
- switching off your computer at night
- downloading files
- streaming music or video

Listening **6** 05 Listen to two people talking about workplace rules and complete this table. Then compare answers with a partner.

	Lateefa	**Ivan**
✓	Ask a technician to install software. • ________________	• ________________ • ________________
✗	• ________________ • ________________	• ________________

7 How does Lateefa feel about the rules in her workplace? How can you tell? Do you think she likes her manager? Why/Why not?



Speaking **8** Work in pairs. Student A, look at the information on this page. Student B, look at the information on page 69. Follow the instructions.

Student A

1 Student B is a new employee in your company. Explain these IT workplace rules to him/her.
  - use company equipment for personal reasons ✗
  - install software ✗
  - change password frequently ✓
  - use Facebook ✗

2 Swap roles. You are a new employee. Listen to Student B explain some IT workplace rules.

9 Work in small groups. Write a list of the technology-related rules in your workplace or place of study. Then compare your list with another group. Which rules would you like to change? Why?

Writing **10** Imagine you are a computer room technician in a college. Write a list of rules for the wall of your computer room.

Meetings

Speaking **1** Work in small groups. Discuss these questions.

1 What happens in a work meeting?
2 Talk about a meeting you've been to. What happened?

Vocabulary **2** Work in pairs or small groups. What are the following? Why are they useful?

- chairperson
- agenda
- minutes
- teleconference
- videoconference

Listening **3** 06 Read this agenda. Then listen to a teleconference in a company that has small offices in different cities and answer the questions. Compare answers in pairs or small groups.

Agenda

In attendance: Juliette, Chief Accountant, Chairperson, head office; Fred, Office Manager, local office; Ulrik, IT Support Officer, local office

Items:

1 replacing old computers
2 cost of new furniture

1 What suggestion did Fred make?
2 What is the problem with that suggestion?
3 What was Fred's next suggestion?
4 What is the problem with that?
5 What was Ulrik's suggestion?
6 Whose suggestion was chosen?

Language

Making suggestions, agreeing and disagreeing

We can use the modal verbs ***shall*** and ***could*** to make suggestions.	*We **could** buy new computers.*
We can also use ***how about/what about + -ing*** to make a suggestion.	***How about hiring** a new technician?*
We can use ***maybe/perhaps*** to soften a suggestion and ***I'm afraid*** to politely disagree. It's usually polite to give a reason if you disagree.	***Maybe** we could upgrade the server.* *There's a problem with that idea, **I'm afraid**. We're cutting costs at the moment.*

4 Look at the audio script for track 06 on pages 72–73 and underline the phrases that make responses more polite.

Speaking **5** Work in pairs. Think of four suggestions similar to those in the teleconference in 3 and take turns to make and respond to the suggestions.

6 Student A, look at the information on this page. Student B, look at the information on page 69. Follow the instructions.

Student A

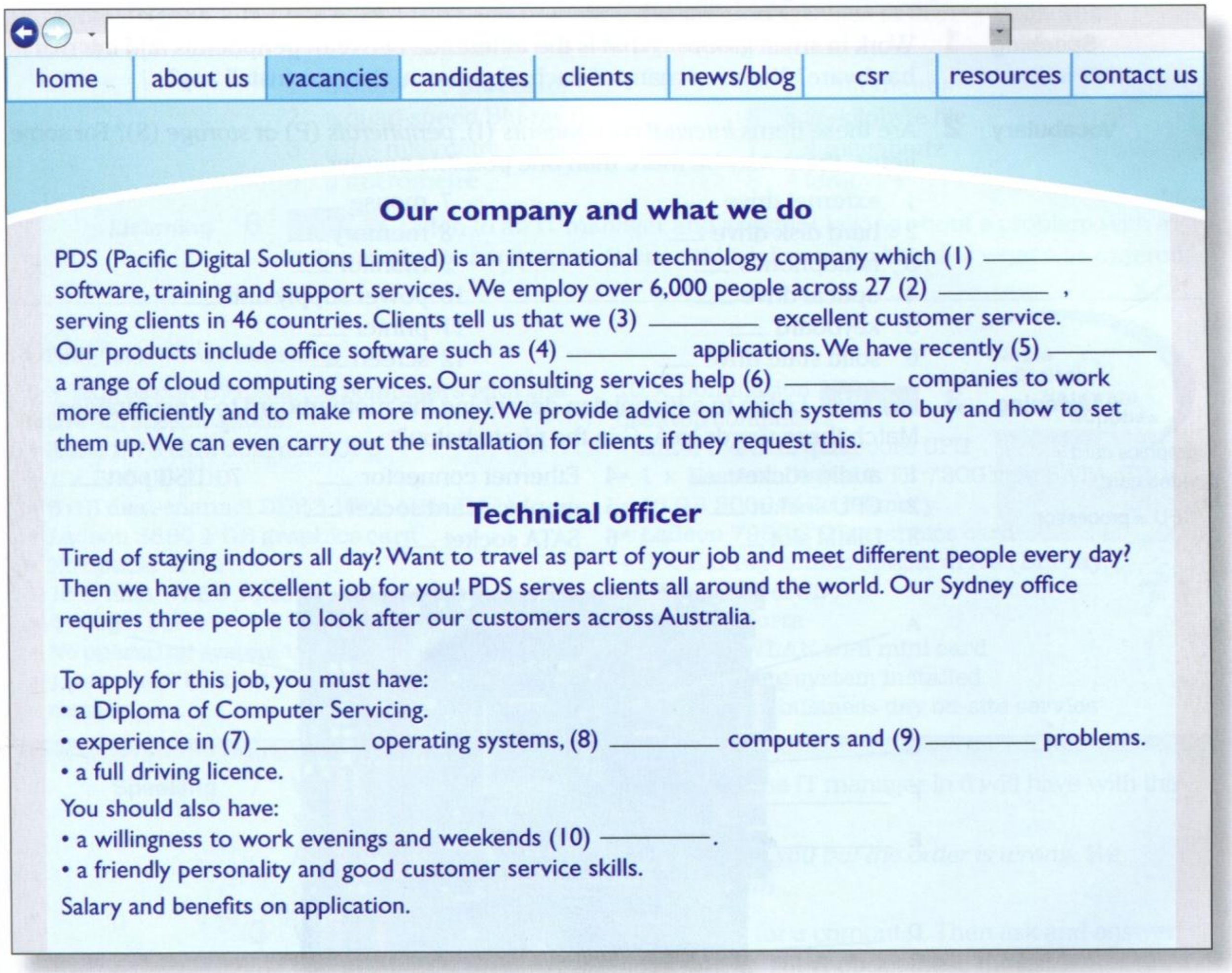
You are an operations manager. Student B is an IT support technician. Roleplay a meeting about replacing old equipment. Follow these steps:

1 Introduce yourself, then listen to Student B's self-introduction.
2 Listen to Student B explaining the problem and making a suggestion.
3 Explain that there isn't much money. Suggest buying tablets instead.
4 Listen to Student B's response.
5 Make a decision and explain it.

Business matters

Reading 1 Complete the company description and job advertisement with the words in the box. Then compare answers with a partner.

client diagnosing from time to time installing
launched maintaining provide service centres
spreadsheet and database supplies



Our company and what we do

PDS (Pacific Digital Solutions Limited) is an international technology company which (1) ________ software, training and support services. We employ over 6,000 people across 27 (2) ________ , serving clients in 46 countries. Clients tell us that we (3) ________ excellent customer service. Our products include office software such as (4) ________ applications. We have recently (5) ________ a range of cloud computing services. Our consulting services help (6) ________ companies to work more efficiently and to make more money. We provide advice on which systems to buy and how to set them up. We can even carry out the installation for clients if they request this.

Technical officer

Tired of staying indoors all day? Want to travel as part of your job and meet different people every day? Then we have an excellent job for you! PDS serves clients all around the world. Our Sydney office requires three people to look after our customers across Australia.

To apply for this job, you must have:

- a Diploma of Computer Servicing.
- experience in (7) ________ operating systems, (8) ________ computers and (9) ________ problems.
- a full driving licence.

You should also have:

- a willingness to work evenings and weekends (10) ________.
- a friendly personality and good customer service skills.

Salary and benefits on application.

Speaking 2 Work in pairs. Roleplay an interview for the job in 1. Student A, you are the interviewee. Prepare to answer questions about the job and company. Student B, you are the interviewer. Prepare some questions to ask Student A. Roleplay the interview. Then swap roles and repeat the activity.

Writing 3 Look again at the company description and job advertisement in 1. Which one of these patterns do they follow?

1 a mixture of general and detailed information throughout
2 general information first and more detailed information later
3 more detailed information first and more general information later
4 only detailed information

4 Write a job advertisement for an IT job you would like or your current IT job. Use the pattern you identified in 3.

2 IT systems

- give hardware specifications
- give instructions for using a GUI
- describe different multimedia types
- explain OS installation

System specifications

Speaking 1 Work in small groups. What is the difference between peripherals and internal hardware? Name as many of each as you can. Can you install any?

Vocabulary 2 Are these items *internal components* (I), *peripherals* (P) or *storage* (S)? For some items, there may be more than one possible answer.

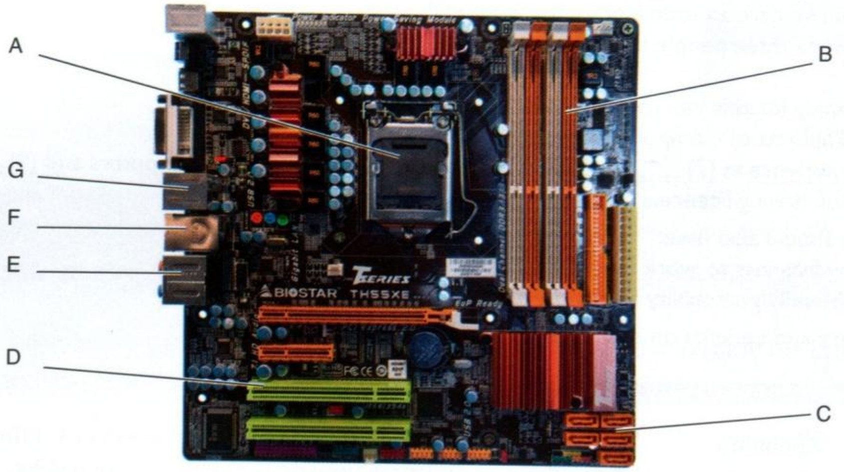
1 external drive ___
2 hard disk drive ___
3 headphones ___
4 optical drive ___
5 keyboard ___
6 solid state drive ___
7 mouse ___
8 memory ___
9 monitor ___
10 power supply unit ___
11 printer ___
12 screen ___

graphics card = video card

CPU = processor

Listening 3 07 Listen to a technician describing the motherboard to a new trainee. Match these words to A–G in the photo below.

1 audio socket ___
2 CPU socket ___
3 DIMM slot ___
4 Ethernet connector ___
5 graphics card socket ___
6 SATA socket ___
7 USB port ___



Language

Large and small numbers

For **decimal values**, we say 'point' for the decimal point and pronounce the next numbers individually. We don't always mention the 0 to the left of the decimal point for values less than 1.	*It's 0.54 millimetres long.* ('nought point five four' or 'point five four', NOT 'nought point fifty-four')
To express large and small numbers, we often use **prefixes**. For example, *kilo-* means '1,000'. The main stress is on the first syllable of the prefix.	*a 3.6-**kilo**byte file*

4 Match the prefixes in the box to these numbers.

dual-	giga-	kilo-	mega-	micro-	milli-	nano-
quad-	tera-					

1 1,000,000,000,000 ________
2 1,000,000,000 ________
3 1,000,000 ________
4 1,000 ________
5 0.000000001 ________
6 0.000001 ________
7 1,000,000 ________
8 4 ________
9 2 ________

Pronunciation **5** 08 Listen and underline the stressed syllables in these words. Then practise saying the words with a partner.

1 a dual-core processor
2 a quad-speed Blu-ray drive
3 a 3.5-millimetre socket
4 a micrometre
5 18 nanometres
6 a 26-kilobyte file
7 2.4 megahertz
8 4 terabytes

Listening **6** 09 Listen to an IT manager and assistant talking about a problem with a delivery of new computers. Correct this delivery slip to show what was ordered.

Dingle Digital Hardware Supplies

Order for: Wood Publishing

5 × Expression 5710 laptop computers with the following specifications:

- Entel 2.73 GHz dual-core CPU
- 1 × 390 GB SDD
- 8 GB dual-channel DDR3 1666 MHz RAM
- Ladeon 3850 1 GB graphics card
- No optical drive
- 15.6-inch WLED 1920 × 1080 screen
- 4 × USB ports
- No operating system installed
- 1 year next business day on-site service

10 × Domination 8720 desktop computers

- Entel 3.4 GHz quad-core CPU
- 1 × Eastern Digital 2 TB 7200 rpm SATA HDD
- 16 GB 2000 MHz memory
- Ladeon 7950 2 GB graphics card
- 6 × Blu-ray combo optical drive (Blu-ray, DVD+/−RW & CD)
- 4 × USB ports
- 802.11n WLAN wi-fi mini card
- No operating system installed
- 1 year next business day on-site service

Speaking **7** Work in pairs. Roleplay the conversation the IT manager in 6 will have with the supplier, Dingle Digital.

Hi, we ordered some new computers from you but the order is wrong. We ordered laptops with ... but they came with ...

8 Work in pairs. Write some specifications for a computer. Then ask and answer questions about your partner's computer. Think about these things:

- processor speed
- memory
- hard drive size
- screen resolution

A: *How fast is the processor?*
B: *It's 2.84 megahertz.*

9 Work in pairs. Suggest specifications for computers for these people. Then compare your answers with another pair.

1 computers for administration staff
2 a computer for a designer
3 a server for a small business
4 a computer for a sales person

I don't think admin staff need a fast processor. They only need it for word processing and email. What about a two-gigahertz processor?

GUI operations

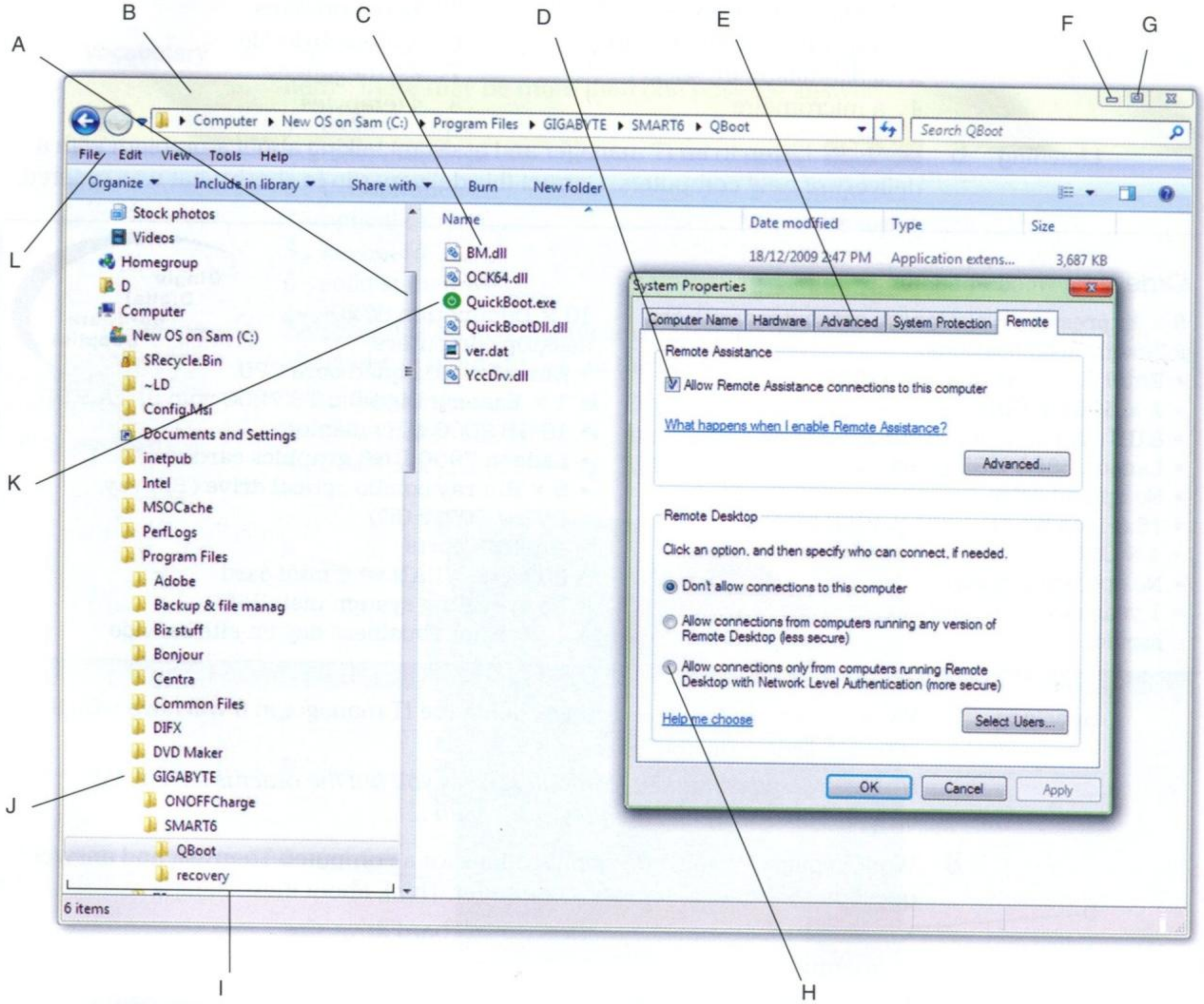
Speaking **1** Work in pairs. Look at the screenshot in 2. What different things can you do to a window?

You can resize it.

GUI = graphical user interface

Vocabulary **2** Match these words to A–L in the screenshot below.

1 scroll bar ___
2 menu ___
3 'Minimise' button ___
4 'Maximise' button ___
5 title bar ___
6 icon ___
7 folder ___
8 filename ___
9 left-hand pane ___
10 tab ___
11 check box ___
12 radio button ___


A
B
C
D
E
F
G
H
I
J
K
L
Computer ▸ New OS on Sam (C:) ▸ Program Files ▸ GIGABYTE ▸ SMART6 ▸ QBoot
Search QBoot
File Edit View Tools Help
Organize ▾ Include in library ▾ Share with ▾ Burn New folder
Stock photos
Videos
Homegroup
D
Computer
New OS on Sam (C:)
$Recycle.Bin
~LD
Config.Msi
Documents and Settings
inetpub
Intel
MSOCache
PerfLogs
Program Files
Adobe
Backup & file manag
Biz stuff
Bonjour
Centra
Common Files
DIFX
DVD Maker
GIGABYTE
ONOFFCharge
SMART6
QBoot
recovery
6 items

Name	Date modified	Type	Size
BM.dll	18/12/2009 2:47 PM	Application extens...	3,687 KB
OCK64.dll			
QuickBoot.exe			
QuickBootDll.dll			
ver.dat			
YccDrv.dll			

System Properties

Computer Name | Hardware | Advanced | System Protection | Remote

Remote Assistance

☑ Allow Remote Assistance connections to this computer

What happens when I enable Remote Assistance?

Advanced...

Remote Desktop

Click an option, and then specify who can connect, if needed.

● Don't allow connections to this computer

○ Allow connections from computers running any version of Remote Desktop (less secure)

○ Allow connections only from computers running Remote Desktop with Network Level Authentication (more secure)

Help me choose

Select Users...

OK Cancel Apply

3 Work in pairs. Match actions 1–7 to their results a–g.

1 Double click on the title bar	a) to open a new menu.
2 Click on a menu	b) and the window fills the screen.
3 Right-click on an icon	c) if you want to move the window.
4 Slide the scrollbar down	d) to hide the window.
5 Click the 'Minimise' button	e) to scroll the window down.
6 Drag the title bar	f) to open it.
7 Select the icon	g) and its background changes colour.

Listening

4 10 Listen to a help desk technician talking to an IT user. What information is the technician looking for?

5 Listen again. Number the instructions in the order you hear them.

☐ Choose 'Properties' from the menu.
☐ Just select 'Manage'.
☐ Select 'Install date'.
☐ Choose the 'Details' tab.
☐ Just right-click where it says 'Disk 0'.
☐ Can you scroll up to the top?

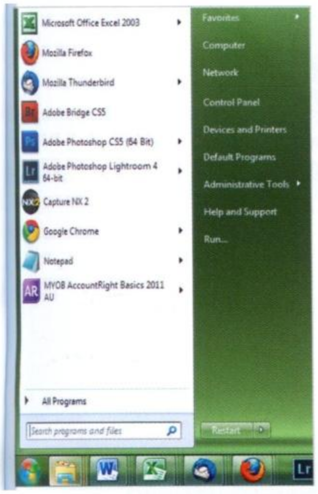
Language

Giving instructions

We often use **imperatives** to give instructions. We use '**softeners**' such as *could you*, *can you* and *just* to make the instructions sound more polite.	***Drag*** *the window to the left.* ***Could you just*** *double click on the bottom icon?*
We use **sequencers** (e.g. *first*, *then*, *next*, *after that*, *finally*) to show the order of the steps.	***First****, just click on the 'Start' button.* ***Then*** *select 'Shut down' in the bottom right corner.*

6 Look at the instructions in 5. Underline the imperatives. What softeners does the speaker use?

Speaking


Microsoft Office Excel 2003
Mozilla Firefox
Mozilla Thunderbird
Adobe Bridge CS5
Adobe Photoshop CS5 (64 Bit)
Adobe Photoshop Lightroom 4 64-bit
Capture NX 2
Google Chrome
Notepad
MYOB AccountRight Basics 2011 AU
All Programs
Search programs and files
Favorites
Computer
Network
Control Panel
Devices and Printers
Default Programs
Administrative Tools
Help and Support
Run...
Restart

7 Work in pairs. Take turns being an IT help desk technician and an IT user. Use these prompts to explain to your partner how to follow the steps for each action.

'Start' button → 'Control Panel' → 'System and Security' heading → under 'System': 'View amount of RAM and processor speed'

A: *First, could you click on the 'Start' button?*
B: *Sure.*
A: *Then select 'Control Panel'. A box will appear.*
B: *OK.*
A: *Click where it says 'System and Security', then 'View amount of RAM and processor speed', under 'System'.*
B: *Got it! Thanks very much.*

1 'Start' button → Mozilla Firefox → double click/title bar
2 right-click on 'c:' drive → 'Properties' → 'Sharing' tab → 'Advanced Sharing' → 'Share this folder' check box → 'OK' → 'Close'
3 press 'Start' key and 'E' key to open Windows Explorer → 'Uninstall or change a program' at top → find 'Anki' → right-click → select 'Uninstall'
4 find clock on bottom right of screen → right-click it → 'Adjust date/time' in pop-up menu → 'Change time zone' button → '(UTC+09.00) Osaka, Sapporo, Tokyo' in drop-down menu → 'OK' → 'OK'
5 'Start' button → 'Control Panel' → 'Appearance and Personalization' heading → 'Display' heading → 'Magnifier tool' link

8 Work in pairs. Take turns to explain these actions. Look at the prompts in 7 or use your own ideas.

how to close a program

First, go to the 'File' menu. Then click 'Exit'. Or click the 'x' in the top right-hand corner of the window.

1 how to open a program
2 how to save a file
3 how to change a program's settings
4 how to delete a file

Writing

9 Write an email explaining the steps for one of the actions in 7.

Multimedia hardware

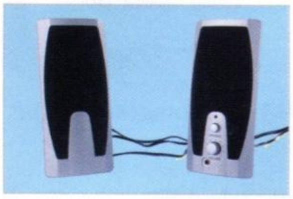
Speaking **1** Work in pairs or small groups. Answer these questions.

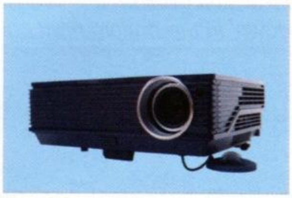
1 What do you use computers for? List as many uses as you can.
2 Which items on your list from question 1 use the items in the box?
3 Which other computer tasks use the items in the box?

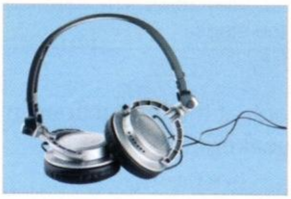
audio graphics images video

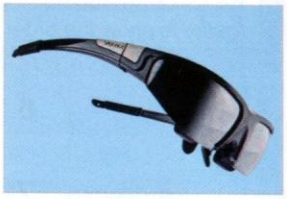
Vocabulary **2** Label the photos with the multimedia equipment in the box.

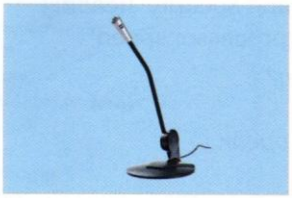
headphones microphone projector speakers video camera
virtual reality goggles webcam

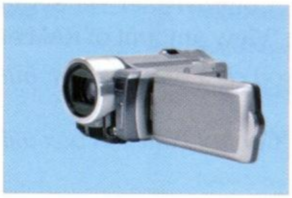

1 ________

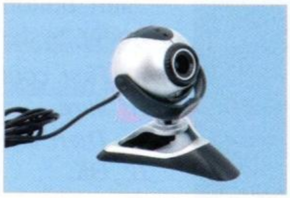

2 ________


3 ________


4 ________

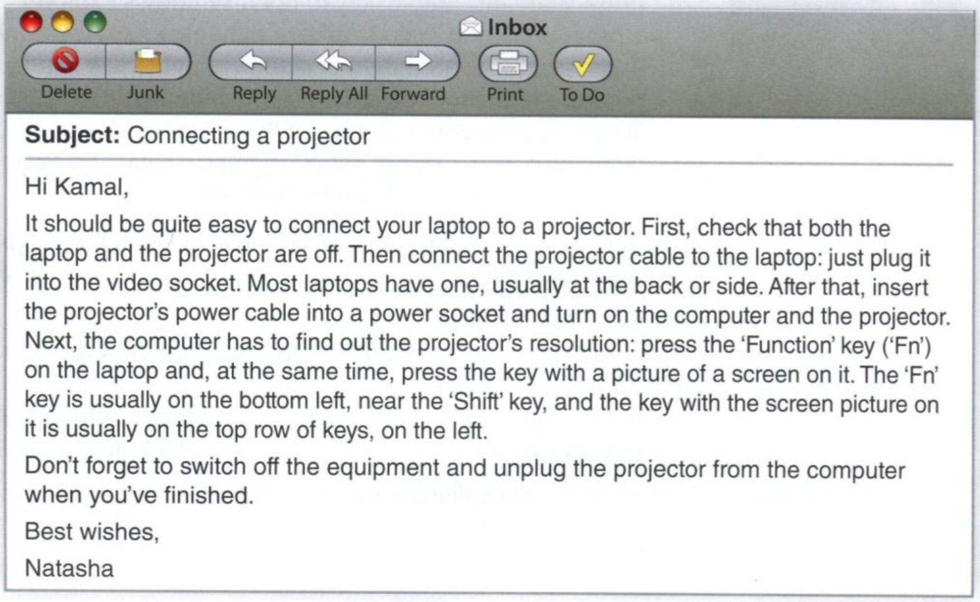

5 ________


6 ________


7 ________

Speaking **3** Work in pairs. Who might use each of the items in 2? What might they use them for?

Reading **4** Read this email quickly. What does Kamal want to do?



Subject: Connecting a projector

Hi Kamal,

It should be quite easy to connect your laptop to a projector. First, check that both the laptop and the projector are off. Then connect the projector cable to the laptop: just plug it into the video socket. Most laptops have one, usually at the back or side. After that, insert the projector's power cable into a power socket and turn on the computer and the projector. Next, the computer has to find out the projector's resolution: press the 'Function' key ('Fn') on the laptop and, at the same time, press the key with a picture of a screen on it. The 'Fn' key is usually on the bottom left, near the 'Shift' key, and the key with the screen picture on it is usually on the top row of keys, on the left.

Don't forget to switch off the equipment and unplug the projector from the computer when you've finished.

Best wishes,

Natasha

Vocabulary

5 Match words 1–8 from the email in 4 to words a–h with a similar meaning.

1 cable
2 plug (into)
3 insert
4 power socket
5 turn on
6 press
7 unplug
8 switch off

a) push
b) put (into)
c) connect
d) connector
e) turn off
f) electricity socket
g) switch on
h) disconnect

6 Complete these prepositional verbs.

1 connect ________
2 plug ________
3 unplug ________
4 disconnect ________

Language

Sentences with two objects

Some sentences have **two objects**. We often use a preposition between the two objects (verb + object of verb + preposition + object of preposition).	*I unplugged* ***the cable from the computer****.* *Insert* ***the plug into the socket****.*

7 Read the email in 4 again and complete these instructions. Use two objects where appropriate.

Switch *off the computer and the projector*.

1 Plug ______________ .
2 Plug ______________ .
3 Switch ______________ .
4 Push ______________ .
5 When finished, turn ______________ .
6 Disconnect ______________ .

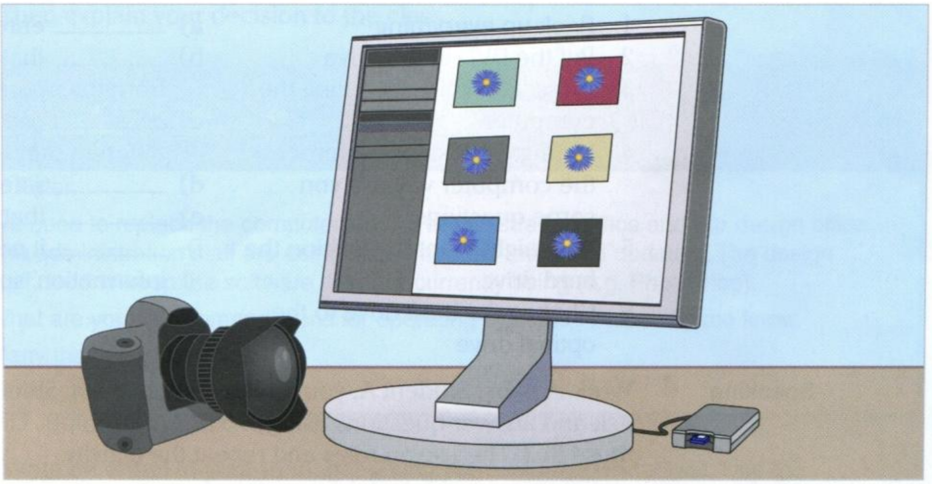
Writing

8 Work in pairs. Read the email in 4 again and mark the features below. What other forms of greetings and signing off can you think of?

- the greeting
- a paragraph
- signing off

9 Write an email explaining how to transfer photographs from a digital camera to a computer. Give instructions for the steps below. Include the features from 8 in your email.

- card reader → computer
- open software
- select card reader/drop down menu
- select destination folder
- 'OK' button



Operating systems

Reading **1** Work in pairs. Put these steps in reinstalling an operating system in the correct order.

- ☐ During the process, the computer will restart by itself several times.
- ☐ Near the end of the process, you can partition the hard drives.
- ☐ In the BIOS, set the first boot drive to DVD. Then reboot again.
- ☐ At the end of the process, the operating system will ask for the product key, time, date, network type and details for user accounts.
- ☐ First, put the installation DVD into the optical drive. Then reboot the computer while you press the 'F2' key. The BIOS will now start.
- ☐ This time, the computer will boot from the DVD and installation will begin.
- ☐ *1* Before you start, back up everything.
- ☐ Near the start of the process, it will ask you to agree to the licence terms.

Vocabulary **2** Find words in 1 that match these definitions.

1 start again ________
2 split a hard drive into parts that act like separate drives ________
3 software built into a computer that controls how it starts up ________
4 the drive that the computer reads first when starting up ________
5 software comes with this to show you are the owner ________
6 settings for a user ________
7 switch a computer off and on again ________
8 a series of actions to do something ________
9 copy data to another place so that you don't lose it ________
10 rules about how you can use software ________

Language

Expressing reason and purpose

We can use these forms to express reason and purpose:	*Why should I update my OS?*
• *for* + noun phrase	***For*** *the new features.*
• *so that* + clause	***So that*** *you can use the new features.*
• *to*-infinitive	***To use*** *the new features.*
• *because* + clause	***Because*** *it has new features.*

3 Work in pairs or small groups. Match 1–6 to a–f. Then complete the gaps with *because*, *so*, *to* or *for* to make sentences.

1 Back up everything
2 Put the DVD in the drive
3 Press 'F2' while rebooting the computer
4 During the installation process, the computer will ask you some questions
5 You might want to partition the hard drive
6 Change the boot drive to the optical drive

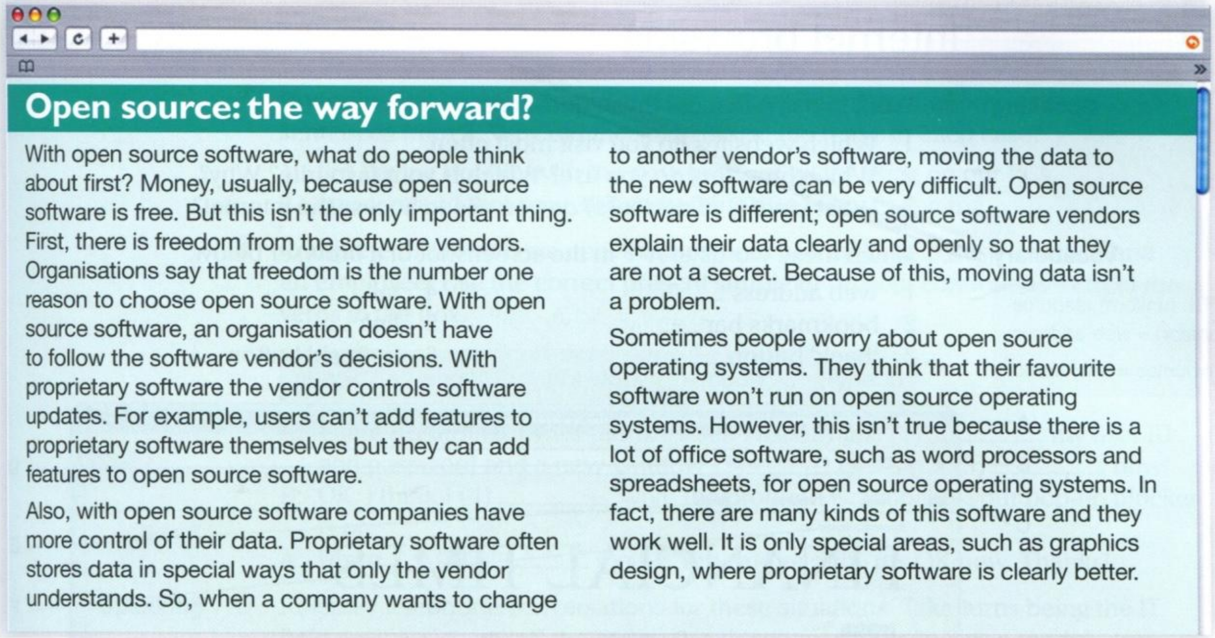
a) ________ enter the BIOS.
b) ________ that the computer restarts from the operating system DVD.
c) ________ use the different partitions for different purposes.
d) ________ safety.
e) ________ that the process can start.
f) ________ it needs to know some information, such as where you are.

Speaking **4** Work in pairs. Student A, you are an IT technician. Student B, you are an IT user. Ask and answer questions using 1–6 in 3 as prompts. Give different reasons from those in 3. Then swap roles and repeat the activity.

Business matters

1 Work in small groups. What do you know about open source software? How is it different from proprietary software? Think about cost, who writes it and how much people use it.

Reading 2 Read this web article and check your answers in 1.



Open source: the way forward?

With open source software, what do people think about first? Money, usually, because open source software is free. But this isn't the only important thing. First, there is freedom from the software vendors. Organisations say that freedom is the number one reason to choose open source software. With open source software, an organisation doesn't have to follow the software vendor's decisions. With proprietary software the vendor controls software updates. For example, users can't add features to proprietary software themselves but they can add features to open source software.

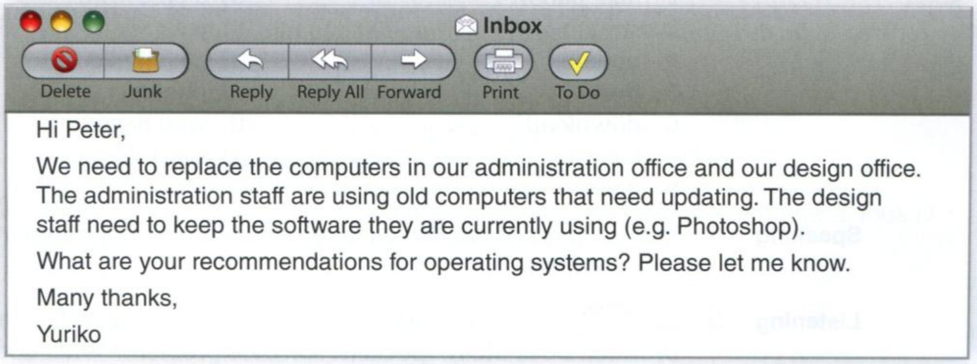
Also, with open source software companies have more control of their data. Proprietary software often stores data in special ways that only the vendor understands. So, when a company wants to change to another vendor's software, moving the data to the new software can be very difficult. Open source software is different; open source software vendors explain their data clearly and openly so that they are not a secret. Because of this, moving data isn't a problem.

Sometimes people worry about open source operating systems. They think that their favourite software won't run on open source operating systems. However, this isn't true because there is a lot of office software, such as word processors and spreadsheets, for open source operating systems. In fact, there are many kinds of this software and they work well. It is only special areas, such as graphics design, where proprietary software is clearly better.

Listening 3 11 Listen to a spokesperson for a major operating system company giving a speech: 'Why open source is a bad idea'. What reasons does the speaker give to use proprietary software? Make a list.

Speaking 4 Use the article in 2 to make a list of reasons to use open source software. Then work in pairs. Give reasons for your answers and discuss any differences.

5 Work in small groups. You are technicians in an advertising company. You look after operating systems and software. Look at this email from your manager and decide whether to use an open source OS, a proprietary OS or some of each. Then explain your decision to the class.



Hi Peter,

We need to replace the computers in our administration office and our design office. The administration staff are using old computers that need updating. The design staff need to keep the software they are currently using (e.g. Photoshop).

What are your recommendations for operating systems? Please let me know.

Many thanks,

Yuriko

Writing 6 Write an email to your manager giving your recommendations. Use the Language box on page 18 and the information about writing emails on page 17.

3 Data communication

- describe browser problems
- define network concepts
- explain advantages of mobile devices
- specify information about ema

Internet browsing

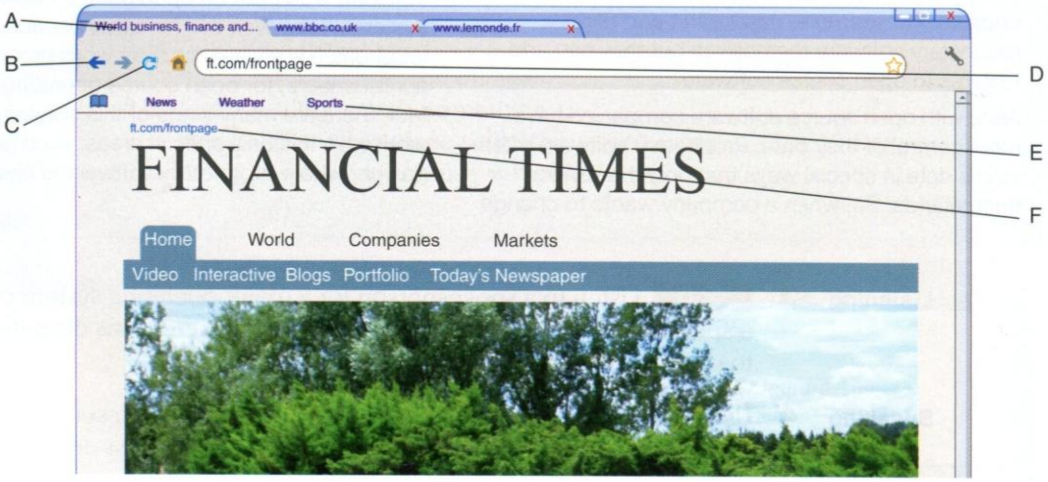
Speaking **1** Work in pairs. Discuss these questions.

1 Which websites do you visit most often?
2 Which browsers do you use? Which is your favourite? Why?
3 What kind(s) of device(s) do you use to access the internet?

Vocabulary **2** Match these words to A–F in the screenshot of a browser below.

URL (uniform resource locator) = web address
favourites = bookmarks

1 web address ___
2 bookmarks bar ___
3 'back' button ___
4 tab ___
5 link ___
6 'refresh' button ___


A
B
C
D
E
F
World business, finance and...
www.bbc.co.uk
www.lemonde.fr
ft.com/frontpage
News
Weather
Sports
ft.com/frontpage
FINANCIAL TIMES
Home
World
Companies
Markets
Video
Interactive
Blogs
Portfolio
Today's Newspaper

3 Match verbs 1–8 to nouns a–h to make collocations for things you can do on the internet. For some items, there may be more than one possible answer.

1 follow
2 take part in
3 stream
4 update
5 post
6 download
7 browse
8 enter

a) video
b) a password
c) your status
d) a webinar
e) photos
f) web pages
g) a comment
h) a link

Speaking **4** Work in pairs. What do you do on the internet? Tell your partner. Use the collocations in 3.

Listening **5** 12 Listen to an admin assistant telephoning an IT specialist about a new browser. Does the IT specialist solve his problem? What does the admin assistant like about the new browser?

6 Listen again. What three things does the admin assistant need help with?

Language

Present simple vs present continuous, stative verbs

We use the **present simple** to talk about something we do regularly. We use the **present continuous** to talk about an action happening now or a temporary situation.	*I **work** in an IT Department. This week **I'm managing** the department because my manager is away.*
Stative verbs (e.g. *like*, *know*, *understand*) describe states rather than actions. We don't usually use the present continuous with stative verbs.	*I **know** how to use HTML.*

7 Underline the present simple and circle the present continuous verbs in these sentences from 5. Why did the speaker use the tense in each case?

1 I'm having trouble with the new browser we're using on our PCs.
2 I understand that now. But something else is confusing me.

8 Complete this telephone conversation between an IT help desk assistant and an employee. Use the correct present simple or present continuous form of the verbs in the box.

check know not work open type in

A: There's a problem with this browser. I usually just (1) ________ my user ID and password and a new window (2) ________ . But it (3) ________ now!
B: OK, I think I (4) ________ what the problem is. Probably your pop-up blocker is on.
A: Hmm … I (5) ________ it now. Yep, you're right. It's OK now. Thanks!

Speaking **9** Roleplay telephone conversations for these situations. Take turns being the IT help desk assistant and the caller. Use the conversation in 8 as a model.

1 problem: video streaming/usually no problem/now not work
solution: internet connection problem/check the connection
2 problem: website images/usually all appear/now no pictures
solution: leave 'Automatically load images' unchecked
3 problem: often visit this website/now error message
solution: enter 'www' in the web address, not 'wwww'

Listening **10** 13 Listen to part of a telephone conversation. Complete 1–5 with the correct symbols from the web address the speaker dictates.

forward slash =
slash = stroke

www.d-o-socialwork.gov.ae/schools_2.html?72

1 dash ___
2 dot ___
3 slash ___
4 underscore ___
5 question mark ___

11 14 Listen to part of a telephone conversation. Which web address does the speaker dictate?

1 www.agamy.com/search/results_78.aspx?p
2 www.agamy.com/search/results/78.aspx-p
3 www.agamy.com/search/results_78.aspx-p

Speaking **12** Work in pairs. Student A, look at the information on page 68. Student B, look at the information on page 70. Follow the instructions.

Networks

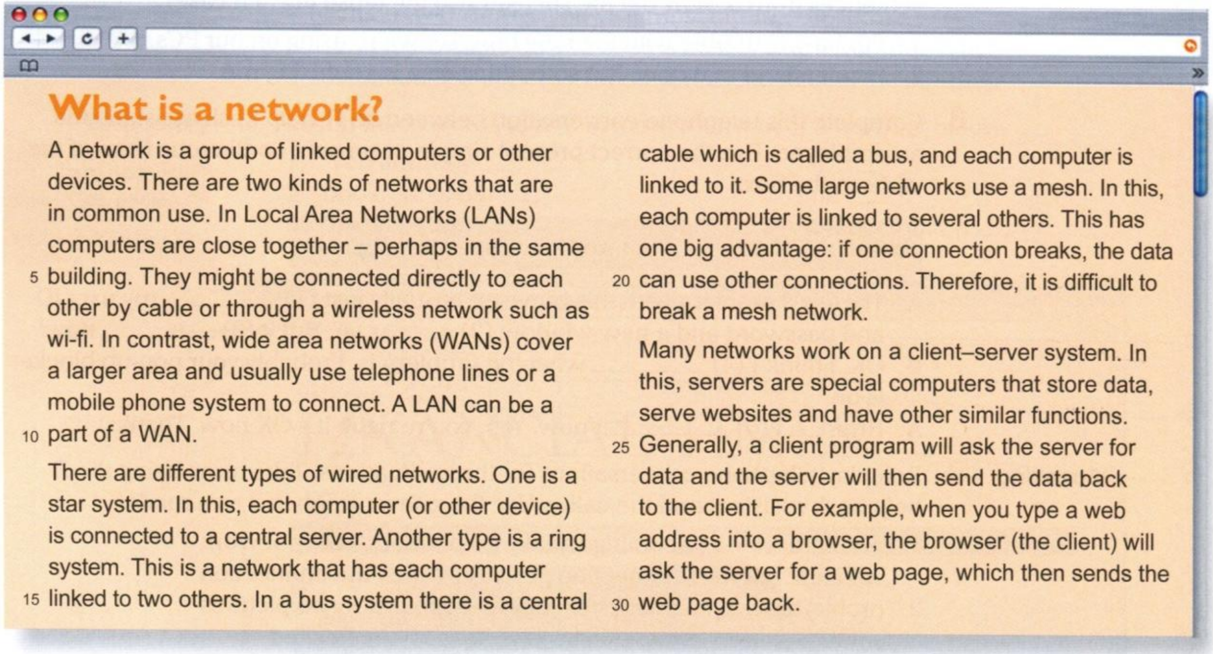
Speaking 1 Work in pairs. Ask and answer these questions.

PIN = personal identification number

1 What computing devices do you use in your daily life (e.g. ATMs)?
2 Do you think they are on a network? Is it wired or wireless?
3 Are these devices secure? What security features do they have (e.g. a PIN)?

Reading 2 Read this web page. Match the paragraphs (1–3) to these points.

a) types of software and devices on networks ____
b) the main types of networks ____
c) the arrangements of computers in networks ____



What is a network?

A network is a group of linked computers or other devices. There are two kinds of networks that are in common use. In Local Area Networks (LANs) computers are close together – perhaps in the same building. They might be connected directly to each other by cable or through a wireless network such as wi-fi. In contrast, wide area networks (WANs) cover a larger area and usually use telephone lines or a mobile phone system to connect. A LAN can be a part of a WAN.

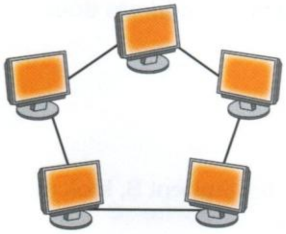
There are different types of wired networks. One is a star system. In this, each computer (or other device) is connected to a central server. Another type is a ring system. This is a network that has each computer linked to two others. In a bus system there is a central cable which is called a bus, and each computer is linked to it. Some large networks use a mesh. In this, each computer is linked to several others. This has one big advantage: if one connection breaks, the data can use other connections. Therefore, it is difficult to break a mesh network.

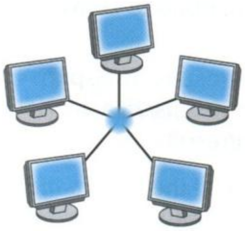
Many networks work on a client–server system. In this, servers are special computers that store data, serve websites and have other similar functions. Generally, a client program will ask the server for data and the server will then send the data back to the client. For example, when you type a web address into a browser, the browser (the client) will ask the server for a web page, which then sends the web page back.

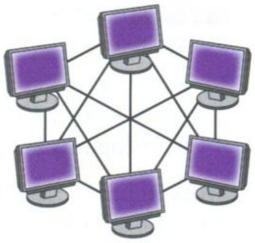
3 Read the web page in 2 again. What do these words refer to?

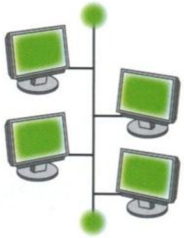
They (line 5) *computers*
1 One (line 11) ________
2 this (line 12) ________
3 Another type (line 13) ________
4 it (line 17) ________
5 this (line 17) ________
6 This (line 18) ________

4 Read the text in 2 again and label these types of network.


1 ________


2 ________


3 ________


4 ________

Speaking **5** Work in pairs. Use the information in the web page in 2 to answer these questions.

1 Do you think these use a LAN or a WAN?
  a) home network
  b) ATMs
  c) computers in police cars
2 Which of these types of software are usually clients?
  a) word processor (not web-based)
  b) web browser
  c) email program
  d) presentation software (e.g. PowerPoint)
  e) instant messaging software

Language

Relative clauses

We can use **relative clauses** as part of a definition, to give important information about something or someone (e.g. to explain the function of something or to say who does something). We use the relative pronouns ***which/ that*** for things and ***who/that*** for people.	*She's the person **who/that** looks after networks.* *The internet is a network **which/that** covers the world.*

6 Underline the relative pronouns in the web page in 2. Then draw an arrow to the word each pronoun refers to.

Speaking **7** Work in pairs. Take turns to explain items 1–6 from Units 1–3 to your partner. Use the nouns and verbs in the box and relative pronouns. Then choose some more words from Units 1–3 to explain.

cable/links
chip/controls
network/uses
part of a browser/helps
(peripheral) device/prints
program/shows
type of network/covers

A: *What's a CPU?* B: *It's a chip that controls a computer.*

1 browser
2 search bar
3 bus
4 WAN
5 wired network
6 printer

Listening **8** 15 Listen to a sales representative explaining a new service to a client. Answer these questions.

1 How secure is the current system?
2 How secure is a VPN?
3 Compared with the current system, how easy is a VPN to use?

9 Listen again and take notes on these items. Then write a definition for each item. Use the nouns in the box in 7 to help you.

1 dongle
2 wi-fi
3 VPN

10 Work in pairs. Take turns to read your definitions from 9 to your partner. Can your partner guess the correct word?

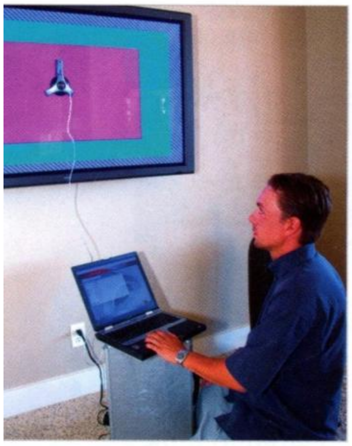
11 In the conversation in 8, the salesperson says that with a VPN, you don't have to worry at all about security. Do you agree? Think about passwords, laptop computers, etc.

Writing **12** Look at the web page in 2. Which sentence in each paragraph shows the paragraph's topic clearly?

a) the first sentence
b) a sentence in the middle
c) the last sentence

13 Write a paragraph for an internal website about how a VPN works. Make sure that you introduce the topic of the paragraph clearly.

Mobile computing



Speaking

1 Work in small groups. What features do you use on a mobile device (e.g. GPS, maps, camera)? What do you use them for?

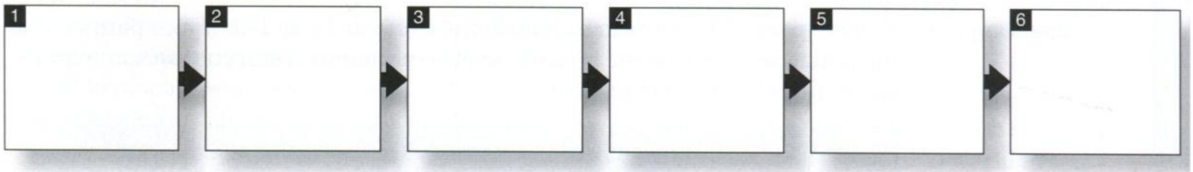
2 Work in pairs. Think about people in these jobs. How might a mobile device be useful to them?

1 a company sales person who visits many client companies
2 a delivery driver for a parcel delivery company
3 a technician who installs entertainment systems in people's homes

3 Complete the flowchart with steps a–f in the correct order.

a) admin staff print out work instructions
b) admin staff send invoice asking for payment
c) client signs paperwork
d) technician finds client and installs system
e) technician picks up instructions
f) technician takes paperwork back to office

Entertainment systems installation workflow



4 Work in pairs. How do you think the workflow in 3 will change if the technician has a mobile device? Draw a new flowchart and complete the stages.

Listening

5 16 Listen to an IT specialist talking to a high-level manager, explaining how their entertainment system installation technicians can use new tablet computers. Check your answers in 3 and 4.

Language

Zero and first conditionals

We use the **zero conditional** to talk about something that usually or always happens as a result of an action or situation.	***If** you **drop** a tablet, it **breaks**.* ***If** you **use** a tablet, you **can send** documents easily.*
We use the **first conditional** to talk about the result of a future action or situation.	***If** we **have** a problem, we**'ll send** a message.*
We use a comma between the two clauses when the *if*-clause comes first but not when it comes last.	*If we buy tablets**,** we'll save money.* *We'll save money if we buy tablets.*

6 The company in 5 is now using the tablets. Complete these zero conditional sentences.

1 With the tablets, if the technician ____________ (not know) the way to a job, he or she ____________ (use) GPS to find the best way there.
2 If the customer ____________ (be) happy with the job, he or she ____________ (sign) using the tablet's screen.
3 If a customer ____________ (change) their order, the system ____________ (update) the details on the tablet.
4 If a technician ____________ (need) to order a new part, he or she ____________ (send) a message electronically.

Speaking **7** Work in pairs. Look at the flowcharts in 3 and 4. Describe how efficiency and flexibility will improve if the company uses tablets. Then look at audio script 16 on pages 74–75 to check your answers.

8 Work in pairs. How are these mobile device features and functions useful?

calculator calendar camera e-book reader GPS
long battery life torch USB recharger

If the phone has a GPS, we can use it to find places. If the battery life is long, ...

9 Work in pairs. What is the person in the photo doing? What is her job? How might a mobile device help her in her job?

Vocabulary **10** Read the advertisement and find words in the text that match these definitions.

1 change something to make it suit a special purpose ________
2 add electronic information to something, e.g. a photo ________
3 the position of something ________
4 changing written or printed words to data that a computer can understand ________
5 give information ________
6 a word used to show that something is completely correct and true ________
7 stored information, e.g. on a computer ________
8 a small part inside smartphones and other devices that measures change of speed, e.g. if someone drops it ________

Your mobile workers can be more productive!

With our fabulous new hand-held devices, your mobile workers can be safer and more productive at the same time! Have no more paperwork that takes up workers' time and that can get lost! Know where your workers are at any time!

We can customise devices for any situation. As an example, let's look at devices that we've customised for traffic wardens:

- The devices have cameras and GPS so the warden can take photographs of illegally parked cars. The device automatically tags the photographs with location and time. Then optical character recognition (OCR) technology can read the car's registration number from the photograph and transmit it wirelessly to a central database. The warden saves time because there is no data entry.
- The devices continuously report the warden's location back to the control centre. So if there is a problem, the control centre knows exactly where the warden is and who to contact.
- Because most of the data is kept electronically, record keeping costs are lower.
- Being a traffic warden can be dangerous. The accelerometer in the device automatically sends a message if it falls, unless the user presses the 'Cancel' button immediately. Then the control centre can call the police.

Speaking **11** Work in small groups. You are technicians in the mobile device company in 10. Suggest how and why you could customise mobile devices for these jobs.

1 delivery driver 2 salesperson 3 nurse

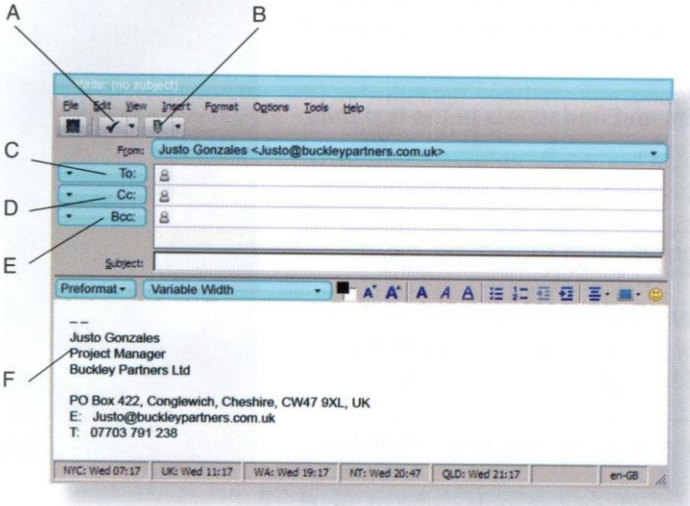
A GPS will be very useful for a delivery driver. If he or she gets lost, it'll help him or her to find his or her customers.

Email

Speaking 1 Work in small groups. How often do you use email? When do you choose email instead of instant messaging, face-to-face or telephone communication? Discuss.

Vocabulary 2 Match these words to A–J in the screenshots of email clients below.

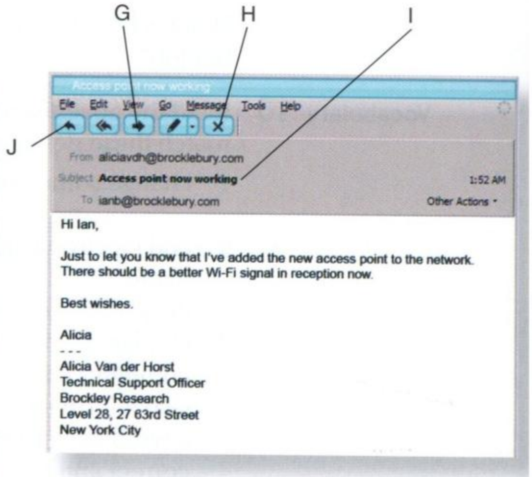
1 subject line ___
2 recipient's address ___
3 email signature ___
4 attachment button ___
5 spell checker ___
6 forward ___
7 blind copy address ___
8 reply button ___
9 copy address ___
10 delete ___


A
B
C
D
E
F
Write: (no subject)
File Edit View Insert Format Options Tools Help
To:
Cc:
Bcc:
Subject:
Preformat
Variable Width
NYC: Wed 07:17
UK: Wed 11:17
WA: Wed 19:17
NT: Wed 20:47
QLD: Wed 21:17
en-GB

From: Justo Gonzales <Justo@buckleypartners.com.uk>

--
Justo Gonzales
Project Manager
Buckley Partners Ltd

PO Box 422, Conglewich, Cheshire, CW47 9XL, UK
E: Justo@buckleypartners.com.uk
T: 07703 791 238


G
H
I
J
Access point now working
File Edit View Go Message Tools Help
Other Actions

From aliciavdh@brocklebury.com
Subject **Access point now working** 1:52 AM
To ianb@brocklebury.com

Hi Ian,

Just to let you know that I've added the new access point to the network.
There should be a better Wi-Fi signal in reception now.

Best wishes.

Alicia

Alicia Van der Horst
Technical Support Officer
Brockley Research
Level 28, 27 63rd Street
New York City

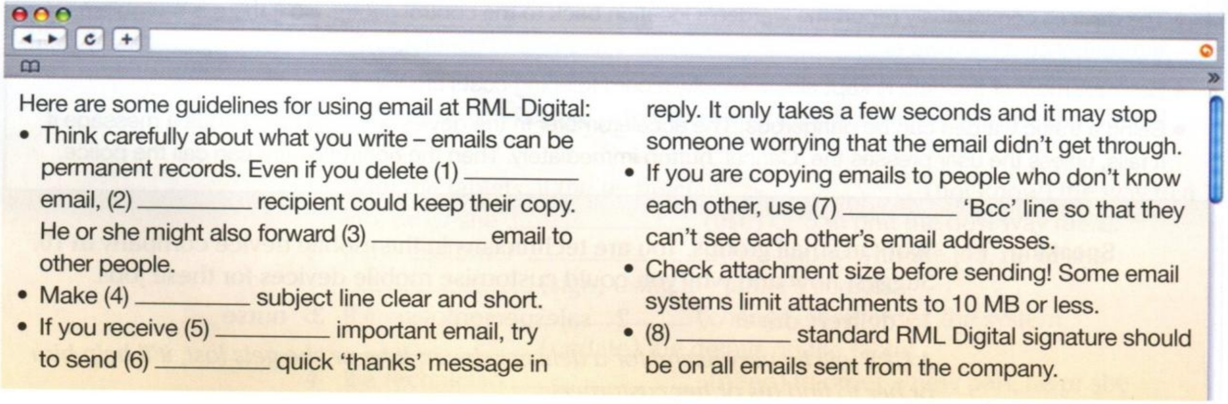
3 Note down the steps in sending an email. Then compare your notes with a partner's. Are they the same?

Language

Articles

We use ***a/an*** when we mention an item for the first time.	*Please send me **a** message.* *Could you send me **an** email to remind me?*
• We use ***the*** when the listener already knows which item we're talking about. • We also use ***the*** when the item is the only one of its kind.	*Could you forward **the** email that Jack sent?* ***The** internet is down.*

4 Complete this intranet post about email guidelines with *a*, *an* or *the*.



Here are some guidelines for using email at RML Digital:

- Think carefully about what you write – emails can be permanent records. Even if you delete (1) __________ email, (2) __________ recipient could keep their copy. He or she might also forward (3) __________ email to other people.
- Make (4) __________ subject line clear and short.
- If you receive (5) __________ important email, try to send (6) __________ quick 'thanks' message in reply. It only takes a few seconds and it may stop someone worrying that the email didn't get through.
- If you are copying emails to people who don't know each other, use (7) __________ 'Bcc' line so that they can't see each other's email addresses.
- Check attachment size before sending! Some email systems limit attachments to 10 MB or less.
- (8) __________ standard RML Digital signature should be on all emails sent from the company.

Business matters

Speaking 1 Work in small groups. You work for an IT consultant and have been asked to prepare a proposal to upgrade a company's electronic communications systems.

1 Read the company profile and the requests from staff members. Make lists of the equipment and software that they're using now, and what works well and what doesn't work well.

2 Discuss and decide the hardware and software needed to meet all the requirements. Think about ways of sending video through browsers, internet security, features of mobile devices and alternatives to email. Give reasons for your choices.

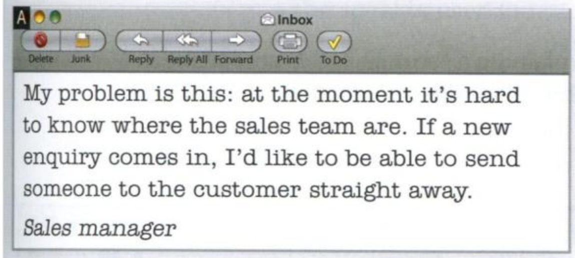
3 Prepare your proposal and present it to the class. Your proposal should have these parts:

- Introduction: Explain the problem.
- Body: Present your proposal.
- Conclusion: Say how much your proposal will help.

Company profile: **Beneflex Architects**

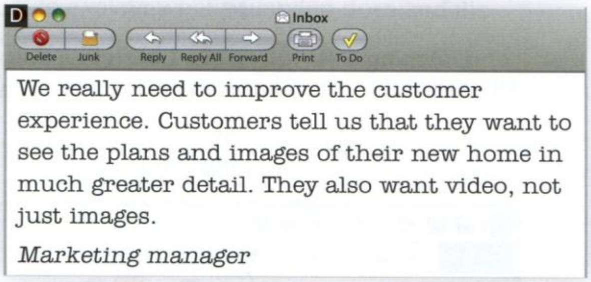
Beneflex Architects is an architecture company with a difference: our sales team are fully qualified architects who talk with you and visit the place where you want to build your house. We ask lots of questions, show you lots of ideas and work with you through every step in the process. In this way, we design your perfect home.

Technology is important to us. It helps us work more efficiently and also helps to give you the best solutions. In addition, we use it to keep you up-to-date all the way through the process.


A
Inbox
Delete
Junk
Reply
Reply All
Forward
Print
To Do

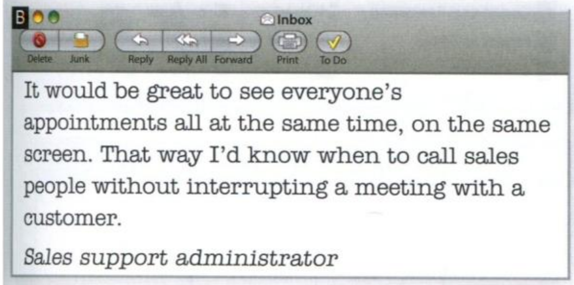
My problem is this: at the moment it's hard to know where the sales team are. If a new enquiry comes in, I'd like to be able to send someone to the customer straight away.

Sales manager


D
Inbox
Delete
Junk
Reply
Reply All
Forward
Print
To Do

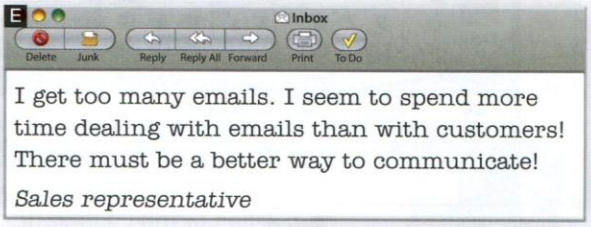
We really need to improve the customer experience. Customers tell us that they want to see the plans and images of their new home in much greater detail. They also want video, not just images.

Marketing manager


B
Inbox
Delete
Junk
Reply
Reply All
Forward
Print
To Do

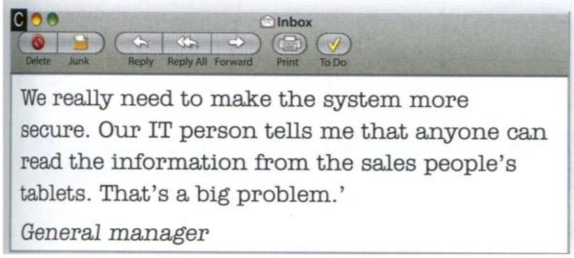
It would be great to see everyone's appointments all at the same time, on the same screen. That way I'd know when to call sales people without interrupting a meeting with a customer.

Sales support administrator


E
Inbox
Delete
Junk
Reply
Reply All
Forward
Print
To Do

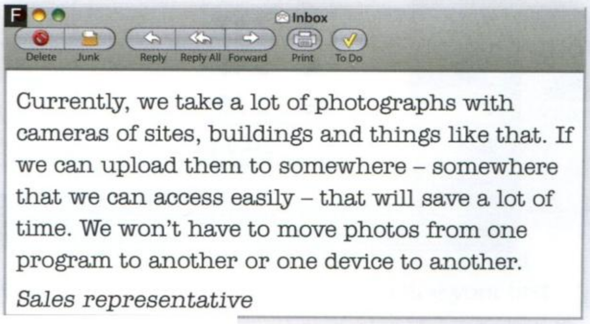
I get too many emails. I seem to spend more time dealing with emails than with customers! There must be a better way to communicate!

Sales representative


C
Inbox
Delete
Junk
Reply
Reply All
Forward
Print
To Do

We really need to make the system more secure. Our IT person tells me that anyone can read the information from the sales people's tablets. That's a big problem.'

General manager


F
Inbox
Delete
Junk
Reply
Reply All
Forward
Print
To Do

Currently, we take a lot of photographs with cameras of sites, buildings and things like that. If we can upload them to somewhere – somewhere that we can access easily – that will save a lot of time. We won't have to move photos from one program to another or one device to another.

Sales representative

4 Administration

- talk about past actions
- describe how to use databas
- explain sequences of system administration tasks
- explain how problems occu

Spreadsheets and formulae

Speaking **1** Work in small groups. Discuss these questions.

1 What do people use spreadsheets for?
2 Do you use spreadsheets? What for? What do you find easy/difficult about using them?

Vocabulary **2** Work in pairs. Match sentences 1–4 to sums a–d. Then rewrite the sentences using the words in brackets.

/ means the same as ÷

1 If we divide 8 by 2, we get 4. (divided by)
2 If we subtract 2 from 8, we get 6. (minus)
3 If we multiply 8 by 2, we get 16. (times)
4 The sum of 8 and 2 is 10. (plus)

a) 8 + 2 =
b) 8 – 2 =
c) 8 / 2 =
d) 8 × 2 =

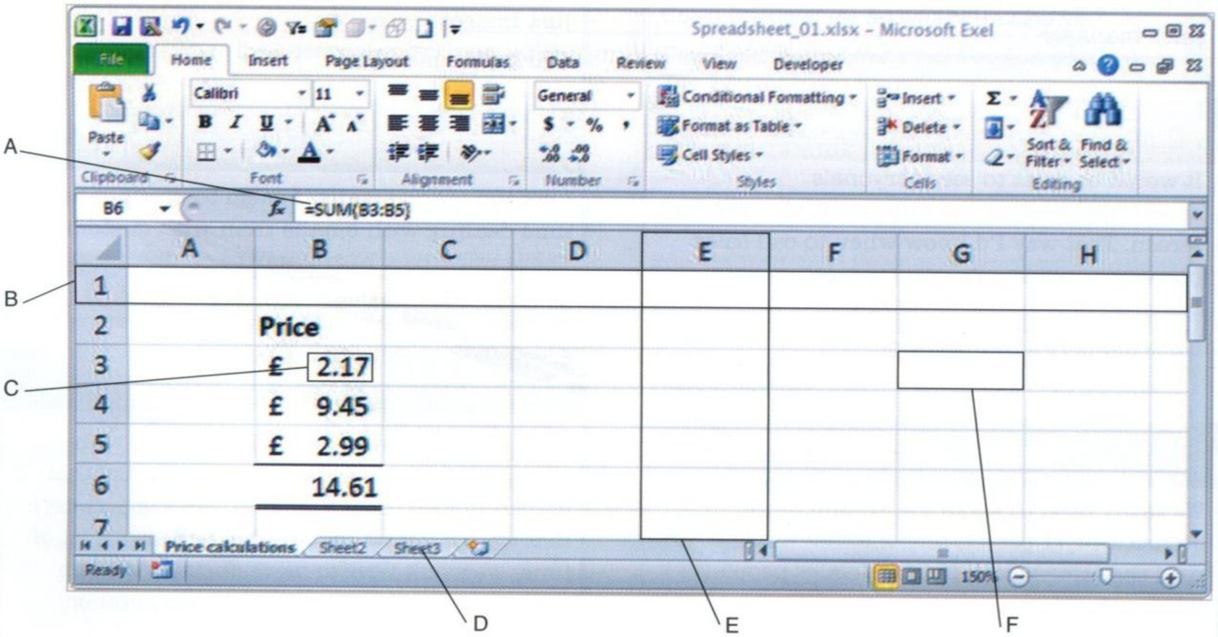
8 divided by 2 is 4.

Speaking **3** Work in pairs. Write eight sums each but don't show your partner. Then take turns to read your sums to your partner for him/her to calculate.

A: *What is 9 divided by 2?*
B: *4.5. If you multiply 10 by 4.6, what do you get?*
A: *46.*

Listening **4** 17 Listen to a trainer explaining a formula in this spreadsheet. Match these words to A–F in the spreadsheet. What does the formula do?

1 cell ___
2 column ___
3 formula ___
4 row ___
5 value ___
6 worksheet ___



B6 =SUM(B3:B5)

	A	B	C	D	E	F	G	H
1								
2		Price						
3		£ 2.17						
4		£ 9.45						
5		£ 2.99						
6		14.61						
7								

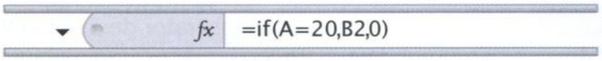
Spreadsheet_01.xlsx – Microsoft Exel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Developer
Paste
Clipboard
Calibri
11
Font
Alignment
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
Sort & Filter
Find & Select
Editing
Price calculations
Sheet2
Sheet3
Ready
150%
A
B
C
D
E
F

Speaking 5 Work in pairs. Student A, look at the information on this page. Student B, look at the information on page 70. Follow the instructions.

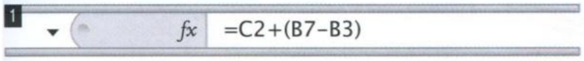
we usually write the multiplication sign as × but spreadsheets often use *

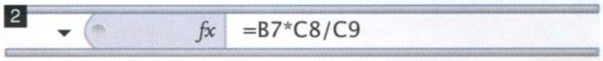
Student A

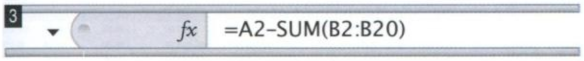
Read these formulae to Student B. Then listen and write down the formulae Student B reads to you.

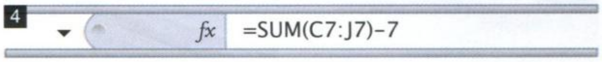

=if(A=20,B2,0)

equals if … open bracket … A equals 20 … comma … B2 comma … nought … close bracket

1

=C2+(B7–B3)

2

=B7*C8/C9

3

=A2–SUM(B2:B20)

4

=SUM(C7:J7)–7

Language

Past simple

We use the past simple to describe finished actions or events in the past. Regular verbs (e.g. *check*, *correct*) usually add *-ed*. Irregular verbs (e.g. *be*, *go*, *get*, *choose, find*) have their own past simple forms. We use *did/didn't* + bare infinitive in questions and negative sentences.	***Did*** *you* ***check*** *the formulae in the spreadsheet?* *Yes, I* ***did****. I* ***found*** *one mistake. The others* ***were*** *all fine.* *I* ***corrected*** *it straight away.*

6 Read audio script 17 on page 75. Which tenses are used? Complete this sentence.

The speaker used the ________ to explain what a function does and the ________ to describe past events.

Listening 7 18 Listen to four employees explaining their problems with spreadsheets. Complete this table.

Action	Problem
1 *typed in a formula*	*get an error message*
2	
3	
4	

Speaking 8 Work in pairs. Match these explanations and solutions to problems 1–4 in 7. Then roleplay the situations you heard.

a) saved in another folder by mistake ___
b) misspelt the function in the formula _1_
c) need to right-click on the cell, select 'Format cells', then select 'Date' ___
d) chose the wrong formula ___

A: Could you help me?
B: Yes, sure. What's the problem?
A: Well, I typed a formula into the spreadsheet but it gives me error messages every time I try to use it!
B: OK, I think you misspelt the function in the formula …

9 Work in pairs. Take turns to describe an IT problem. Explain what happened and how you solved the problem. Then form new pairs and describe your first partner's problem to your new partner.

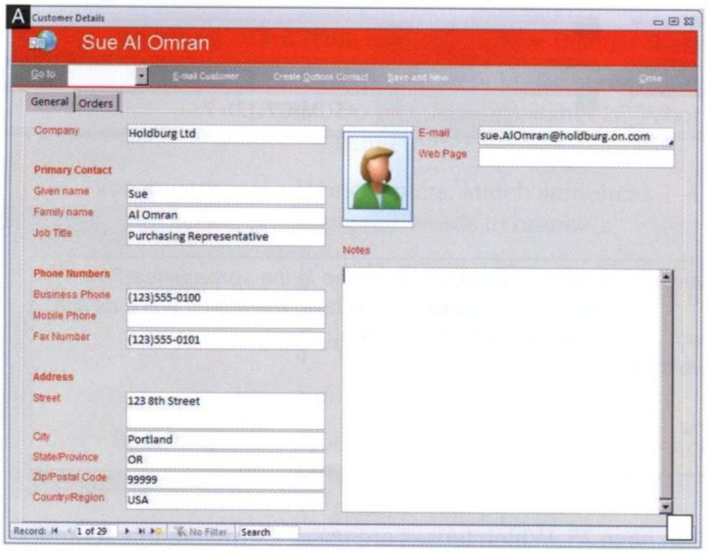
Databases

Speaking **1** Work in small groups. Discuss these questions.

1 What database programs do you know?
2 What do people use databases for? Give examples.

Listening **2** 19 Listen to a database administrator describing the structure of a company database to a trainee. Match these words to screenshots A–C.

1 report 2 table 3 form



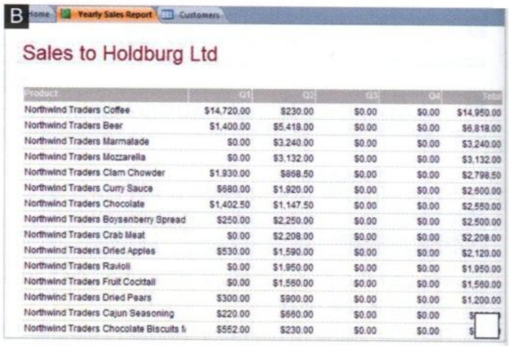
Company: Holdburg Ltd

Primary Contact
Given name: Sue
Family name: Al Omran
Job Title: Purchasing Representative

Phone Numbers
Business Phone: (123)555-0100
Mobile Phone:
Fax Number: (123)555-0101

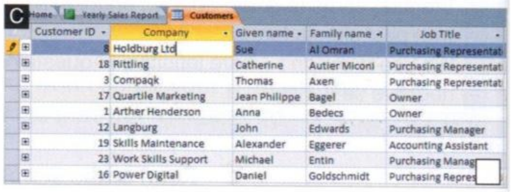
Address
Street: 123 8th Street
City: Portland
State/Province: OR
Zip/Postal Code: 99999
Country/Region: USA

E-mail: sue.AlOmran@holdburg.on.com
Web Page:



Sales to Holdburg Ltd

Product	Q1	Q2	Q3	Q4	Tota
Northwind Traders Coffee	$14,720.00	$230.00	$0.00	$0.00	$14,950.00
Northwind Traders Beer	$1,400.00	$5,418.00	$0.00	$0.00	$6,818.00
Northwind Traders Marmalade	$0.00	$3,240.00	$0.00	$0.00	$3,240.00
Northwind Traders Mozzarella	$0.00	$3,132.00	$0.00	$0.00	$3,132.00
Northwind Traders Clam Chowder	$1,930.00	$868.50	$0.00	$0.00	$2,798.50
Northwind Traders Curry Sauce	$680.00	$1,920.00	$0.00	$0.00	$2,600.00
Northwind Traders Chocolate	$1,402.50	$1,147.50	$0.00	$0.00	$2,550.00
Northwind Traders Boysenberry Spread	$250.00	$2,250.00	$0.00	$0.00	$2,500.00
Northwind Traders Crab Meat	$0.00	$2,208.00	$0.00	$0.00	$2,208.00
Northwind Traders Dried Apples	$530.00	$1,590.00	$0.00	$0.00	$2,120.00
Northwind Traders Ravioli	$0.00	$1,950.00	$0.00	$0.00	$1,950.00
Northwind Traders Fruit Cocktail	$0.00	$1,560.00	$0.00	$0.00	$1,560.00
Northwind Traders Dried Pears	$300.00	$900.00	$0.00	$0.00	$1,200.00
Northwind Traders Cajun Seasoning	$220.00	$660.00	$0.00	$0.00	$
Northwind Traders Chocolate Biscuits M	$552.00	$230.00	$0.00	$0.00	$



Customer ID	Company	Given name	Family name	Job Title
8	Holdburg Ltd	Sue	Al Omran	Purchasing Representat
18	Rittling	Catherine	Autier Miconi	Purchasing Representat
3	Compaqk	Thomas	Axen	Purchasing Representat
17	Quartile Marketing	Jean Philippe	Bagel	Owner
1	Arther Henderson	Anna	Bedecs	Owner
12	Langburg	John	Edwards	Purchasing Manager
19	Skills Maintenance	Alexander	Eggerer	Accounting Assistant
23	Work Skills Support	Michael	Entin	Purchasing Manag
16	Power Digital	Daniel	Goldschmidt	Purchasing Repres

3 Listen again. Which option best describes what the database keeps track of?

a) clients and orders b) stock and orders c) orders and full accounts

Vocabulary **4** Complete this manual with the words in the box. Then read audio script 19 on page 75 and check your answers.

fields form objects primary key query the database
record report retrieve a record unique

A database has several parts. These are called (1) _________. The simplest of these is a table; most databases have at least two. Tables look like a spreadsheet. Each row in the table is a(n) (2) _________, containing information about one item, such as a person or something that the company sells. Each of these contains several (3) _________ with information about the item. For example, in a company's employee database, these might be family name, given name, phone number and so on. One important point is that one field in each record must be (4) _________ – the same data must not be in any other record. We call this field the (5) _________. It can be a staff ID number, for example, but it can't be a given name because many people have the same given name.

Another type of object is a(n) (6) _________, which is used for entering data into tables. A third object type is a(n) (7) _________. This can show data from more than one table at the same time, looks good and is suitable for printing.

There are several ways to get data out of a database. One is simply to (8) _________ – for example, if we want to check the data in a single record, such as an employee's phone number. If we want to combine information from several tables or to do something with the data such as add up financial information from several records, we can (9) _________.

Speaking

5 Work in small groups. For each of these tables, discuss which field is a good primary key (more than one answer might be possible). Be prepared to give reasons for your answers.

1 A database table holding details of a club's members. The field headings are: *Given name*, *Family name*, *Email address*, *Membership number*, *Address* and *Mobile number*.
2 A database table with details of products that a company holds in stock. The field headings are: *Product name*, *Product price*, *Number of units* and *Barcode*.
3 A database table of patients in a hospital. The field headings are: *Family name*, *Given name*, *Date of entry to the hospital*, *Bed number*, *Case number* and *National identity card number*.

The given name can't be a primary key because it isn't unique – many people have the same first name. ...

6 Work in small groups. Discuss tables, fields and primary keys that you could use for records in databases in these cases.

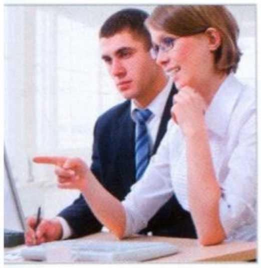
1 a dentist's database of patients
2 a language school's database of students
3 a travel agent's database of airline tickets
4 a database in an online multi-player game in which players can stop and restart their games whenever they want

7 Compare your answers in 6 with another group.

Language

By + *-ing*

We can use ***by* + *-ing*** to express how to do things.	*We can find the total number of hours* ***by querying*** *the database.* ***By running*** *a report, we can print a list of customers.*



8 Work in pairs. Ask and answer questions about how to do these things.

enter data in a database (form)
A: *How do you enter data in the database?*
B: *You can do that by opening a form and entering the data into the fields.*
1 find information in a database (query)
2 add a column of numbers in a spreadsheet (sum/formula/spreadsheet)
3 make sure each record in a database is unique (use/primary key)
4 print information from a database (run/report)

Speaking

9 Work in small groups. Read this scenario and discuss possible solutions for each problem.

A company has these problems:
- Information on paper takes up too much space in the office.
- It is difficult to find information on paper.
- Admin staff spend a lot of time entering data. Surely computers can do this?
- They enter the same data into different spreadsheets.
- Copying and pasting data from spreadsheets into word processor documents is very slow and doesn't look very good.

Possible solutions:
- scanning
- optical character recognition (OCR)
- set up a database
- run reports

By scanning all your documents, you will use less paper.

Systems administration

Speaking 1 Work in pairs. Read this definition of what a systems administrator does and write the words in the box in the correct column in the table.

A systems administrator is responsible for whole computer systems and networks.

deploys new software
designs databases
looks after network security
sets up user accounts
updates software across an organisation
works on a help desk
writes software to sell to other companies

A systems administrator's task	Not a systems administrator's task

2 Look at the second column of the table in 2. Choose a job title from page 4 for each task.

Listening 3 20 Listen to a systems administrator asking a technician about the status of the company's computer systems. Is it a small company? How do you know?

4 Listen again and tick ✓ the correct column in this table. Were there any big problems?

	Worked fine	Problem found	Not mentioned
1 deploy new software upgrades			
2 deploy new software applications			
3 backup systems			
4 disk drives			
5 set permissions			
6 check logs			
7 reset passwords			

Vocabulary 5 Find words in the table in 4 that match these definitions.

1 change; set again ________
2 install on many computers at the same time ________
3 settings on a computer, file or folder that say who can use it ________
4 data that a program or computer produces while it runs, to show how well it is working ________

6 Complete these collocations and phrasal verbs from the conversation in 3 with the words in the box. Then read audio script 20 on page 75 to check your answers.

crash out out of running again smoothly (× 2)

1 run ________
2 disk ________
3 be up and ________
4 lock (someone) ________ (something)
5 check (something) ________
6 go ________

Language

While, before, after

We can use ***while***, ***before*** and ***after*** to show the order of events.	***While*** *you install the OS, the computer will ask you some questions.* ***Before*** *you reinstall the OS, back everything up.*
If the same person is doing the action in both clauses, we can use the *-ing* form of the verb after these words.	***After resetting*** *the password, log in to check that the new one works.*

7 Use these prompts to write sentences with *while*, *before* or *after*.

install the software/do a full backup
Before installing the software, do a full backup.

1 install an operating system/the computer may reboot several times
2 deploy major software upgrades/train the users
3 replace the hard drive/everything will go smoothly
4 forget a password/reset it

Listening **8** 21 Listen to extracts from five conversations and write the action that should happen first in each case.

1 *email a report* 3 ______________ 5 ______________
2 ______________ 4 ______________

Pronunciation **9** Look at audio script 21 on page 75 and underline the sentences with *before*, *while* and *after*. Then listen again and mark the intonation on these sentences as rising (↗) or falling (↘). Does the intonation go up or down in *yes/no* questions? And statements?

Speaking **10** Work in pairs. Take turns to ask your partner to do these tasks. Use *while*, *before* or *after*.

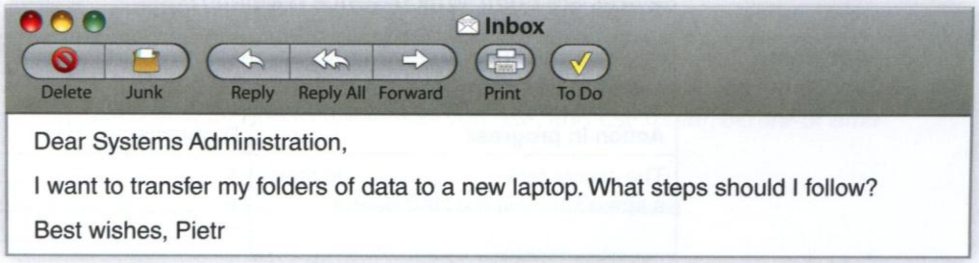
1 check the logs/finish work for the day
2 check out the database problem/start work tomorrow
3 be in the server room/check the network cables
4 new designer arrives/set permissions on his computer

11 Work in small groups. Decide what precautions you would take in these situations. What would you do or check before, while or after doing these actions?

1 upgrade some software
2 remote access someone's desktop
3 switch off a server with users' computers networked to it
4 deploy new software

Writing **12** Write a response to this email. Use these prompts to help you.

- plug memory stick/old computer
- drag folders/memory stick/use Windows Explorer
- unplug memory stick/old computer/plug/new laptop
- drag folders/memory stick/new laptop



Dear Systems Administration,

I want to transfer my folders of data to a new laptop. What steps should I follow?

Best wishes, Pietr

Peripherals

Speaking 1 Work in pairs. Make a list of as many peripheral devices (e.g. printer, screen) as you can. Then describe the items on your list to your partner. Can he/she guess what they are?

It's for listening to music. You wear it on your head.

Vocabulary 2 Match photos A–H to definitions 1–8.

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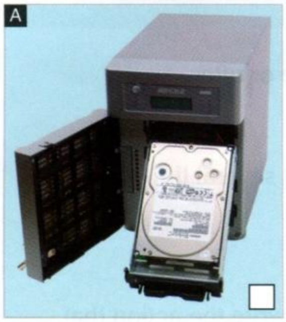
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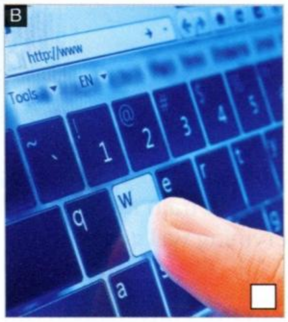
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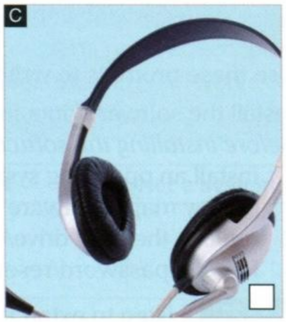
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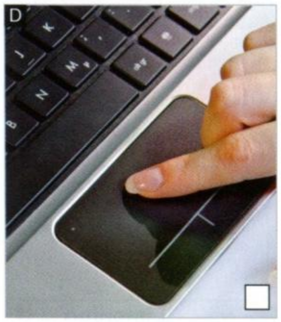
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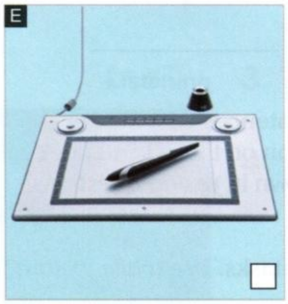
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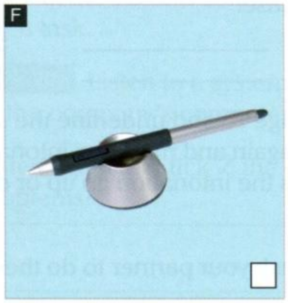
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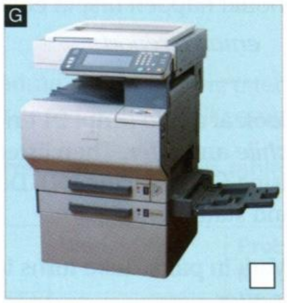
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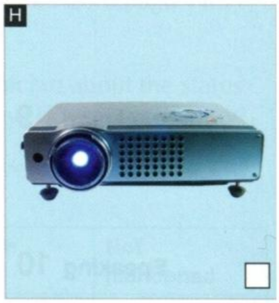
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1 NAS (network attached storage) device: a collection of drives in a single box, accessed through a network and thus more flexible than a device attached to only one computer ____
2 touchpad: part of a laptop computer used instead of a mouse for moving the cursor ____
3 stylus: a pen-shaped device sometimes used with some kinds of screens ____
4 graphics tablet and stylus: a flat pressure-sensitive pad and pen-shaped device, often used with graphic design software ____
5 touch screen: a screen that can detect when and where a finger touches it ____
6 projector: a device that shows a copy of the computer's screen on a large screen, often used in presentations ____
7 headset: a device people wear on their heads that includes a microphone as well as headphones ____
8 multifunction printer: a printer that also has other functions such as scanning, copying and/or faxing ____

3 Write *I* next to the input devices and *O* next to the output devices in 2. Which devices are both? Which device is neither?

Listening 4 22 Listen to an assistant systems administrator explaining a problem to his manager and complete this table.

Action in progress	Problems
The accountant ____________ to save a spreadsheet to the NAS device.	1 ____________ 2 ____________ 3 ____________

Language

Past continuous and past simple

We use the **past continuous** to talk about an action that was in progress at a particular point in the past. We also use it when we want to emphasise that a past action continued for some time.	*I **was working** at 2 p.m. yesterday.* *I **was working** all night.*
When a shorter action happens in the middle of another longer action or suddenly ends it, we use the **past continuous** for the longer action and the **past simple** for the shorter action. We use *when* before the past simple and *while* before the past continuous.	*He **was printing** from the multifunction device **when** it **stopped** working.* *The printer **ran out** of ink **while** I **was using** it.*

Speaking **5** Work in pairs. Take turns to explain these problems to your partner. Remember to say what you were doing at the time. Use the Language box to help you.

1 printer: paper jam
2 headset: sound/stop
3 graphic tablet: move stylus/cursor not move
4 projector: light/stop working

Writing **6** Choose one of the problems in 5. Write a short email to your company's IT Support Office explaining the problem.

Business matters

Speaking **1** Work in small groups. Read this scenario and choose three of the problems. Discuss possible solutions to the problems you chose.

You are assistants to your company's systems administrator, Zafia. She is away for a few days, so you were looking after the company's IT systems. A few problems occurred, which, together, you solved. Each day Zafia is away, you have to write an email to her explaining what happened during the day. Here are some of the problems you've had to solve:

- salesperson's laptop: hard drive crashed
- Marketing Department: want a new report in their database
- internet connection: several dropouts
- backup system: failed
- new employee: locked out of the human resources database
- projector: wrong cables

Writing **2** Complete this log. Use problems from 1 or problems of your own choice.

IT Department: daily log

	Time	Problem	Action taken
1			
2			
3			

Speaking **3** Work in pairs. Take turns to explain the problems from the log in 2 to your partner. Pay attention to the tenses you use, and use *while*, *before* or *after* where appropriate.

Writing **4** Read the scenario in 1 again and write an email to Zafia.

5 Choice

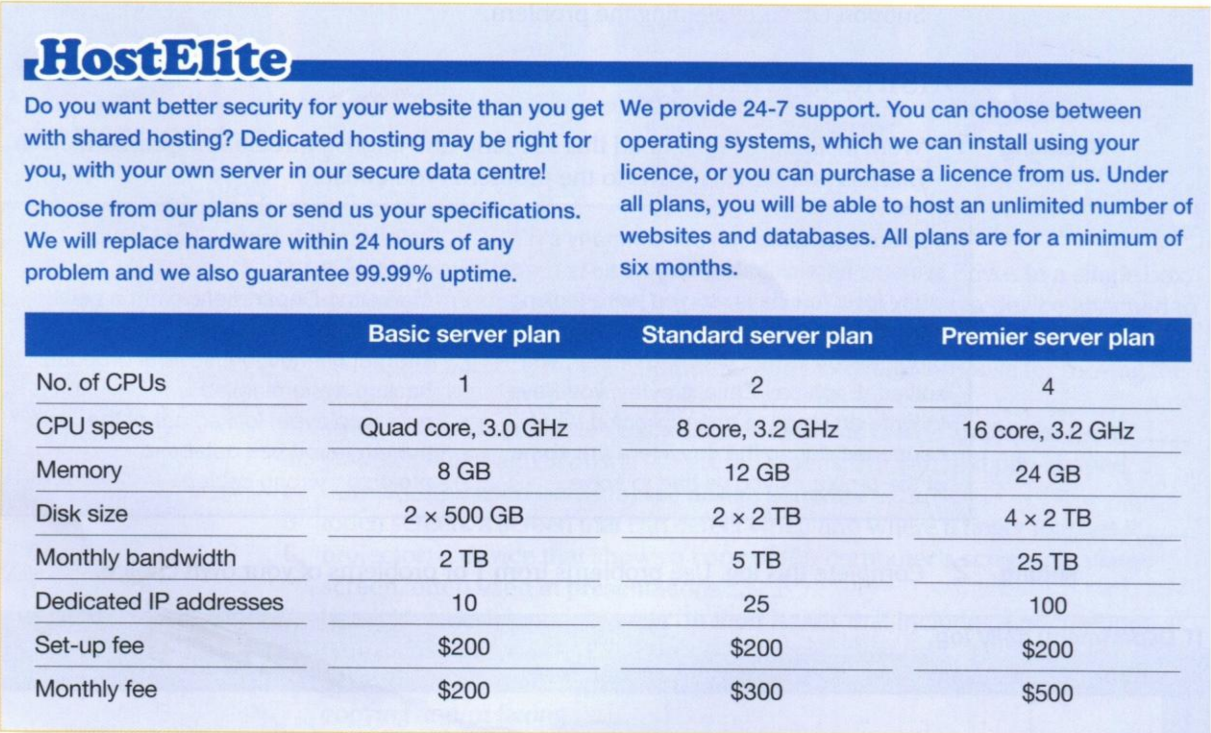
- compare products
- discuss IT costs
- research products
- recommend products

Web hosting

Speaking **1** Work in small groups. When you shop for IT-related items, how much time do you spend comparing items before you purchase them?

Vocabulary **2** Read this web page and find words that match these definitions.

1 a system in which each server has only one client's websites on it ________
2 promise to fix any problems ________
3 the time when the service is working ________
4 the smallest amount or number possible or necessary ________
5 the largest amount of data that can be moved ________
6 a unique number to identify a computer on the internet ________



HostElite

Do you want better security for your website than you get with shared hosting? Dedicated hosting may be right for you, with your own server in our secure data centre!

Choose from our plans or send us your specifications. We will replace hardware within 24 hours of any problem and we also guarantee 99.99% uptime.

We provide 24-7 support. You can choose between operating systems, which we can install using your licence, or you can purchase a licence from us. Under all plans, you will be able to host an unlimited number of websites and databases. All plans are for a minimum of six months.

	Basic server plan	Standard server plan	Premier server plan
No. of CPUs	1	2	4
CPU specs	Quad core, 3.0 GHz	8 core, 3.2 GHz	16 core, 3.2 GHz
Memory	8 GB	12 GB	24 GB
Disk size	2 × 500 GB	2 × 2 TB	4 × 2 TB
Monthly bandwidth	2 TB	5 TB	25 TB
Dedicated IP addresses	10	25	100
Set-up fee	$200	$200	$200
Monthly fee	$200	$300	$500

Reading **3** Work in pairs. Your manager has asked you these questions. Answer them with information from the web page in 2.

1 What can we do if HostElite's standard plans aren't suitable?
2 What guarantees and support do they provide?
3 Can we use our current server OS licence?
4 If we set up another website, can we also host that on the same server?
5 Can we try them out for a month or two, to see how good they are?
6 How much data can we transfer every month?

Language

Comparatives and superlatives

We use **comparatives** to compare two things. We use *-er than*, *more ... than* or *less ... than* with adjectives. We use *more*, *less* or *fewer* with nouns.	*Servers are **more expensive than** tablets.* *Laptops are **less expensive than** servers.* *We have **fewer servers than desktops**.*
We use *the same* (*as*) or *as* + adjective + *as* to show that two things are the same.	*The set-up fee is **the same** for both plans.* *It's **as fast as** the other server.*
We use **superlatives** to compare more than two things. We use *the ...-est*, *the most ...* or *the least ...* with adjectives. We use *the most* or *the least* with nouns.	*This server is **the fastest** of the three but **the least reliable**.* *Which server has **the most memory**?*

4 Look at the table in 2 and complete this product comparison about HostElite's services with the correct form of the words in brackets.

> The Premier server's processor is (1) ________ (powerful) of the three. This server has (2) ________ (drives) the Standard server (four instead of two). All have (3) ________ (uptime) guaranteed and they are equally secure. The Basic plan provides (4) ________ (bandwidth) the other two plans, with the Premier plan offering (5) ________ (bandwidth).
>
> All three plans have (6) ________ (set-up fees) but the monthly fee for the Standard plan is (7) ________ (high) the fee for the Basic plan. Overall, the Premier plan has (8) ________ (high) specifications but is (9) ________ (expensive).

Pronunciation **5** 23 Listen to these sentences and mark the stressed words. Then practise saying the sentences.

1 Dedicated hosting is more secure than shared hosting.
2 The Basic plan gives you more bandwidth than the Superior plan.
3 Websites run faster on dedicated servers than on shared servers.
4 Of the three, the Basic plan has the least powerful processor.

Speaking **6** Work in pairs. Ask and answer questions about these features of HostElite's services. Use language from the Language box.

bandwidth   control panel   minimum contract length   monthly fee

Which plan has the largest disk capacity?

Listening **7** 24 Listen to two IT officers talking about the products in the web page in 2 and choose the correct answer, a, b or c.

1 For this company, $200 per month is ___ .
a) cheap   b) reasonable   c) expensive
2 The company is ___ .
a) very small   b) medium-sized   c) large
3 The current website size is ___ .
a) 1 GB   b) 1 TB   c) 2 TB
4 The current monthly bandwidth usage is about ___ .
a) 1 GB   b) 1 TB   c) 2 TB
5 The company ___ processing power.
a) doesn't need much   b) needs quite a lot of
c) needs a very large amount of
6 The company sells to ___ .
a) other companies   b) consumers

IT costs

Speaking

1 Work in small groups. Discuss these questions.

1 What electronic devices do you own? What electronic devices would you like to have?
2 Are they cheap or expensive?
3 What accessories and services can you buy for them?

Vocabulary

2 Complete these collocations relating to IT hardware and services with the words in the box.

battery card extended internet memory purchase
software spare technical training USB

1 ________ service
2 ________ reader
3 ________ cables
4 ________ course
5 ________ battery
6 ________ charger
7 ________ cost
8 ________ support
9 ________ card
10 ________ licence
11 ________ warranty

Speaking

3 Work in small groups. Discuss these questions.

1 For each device you mentioned in 1, which items in 2 go with it?
2 For the accessories and services in 2 that you haven't mentioned yet, think of a device you could use them with.

Listening

4 25 Listen to a manager talking about costs. What kind of gadget is she talking about?

5 Listen again and complete these sentences. What is the total cost over one year?

1 It ________ €1,200 to buy.
2 We ________ €45 ________ some memory cards.
3 That ________ €35 ________ a case.
4 We also ________ €4.50 a month.
5 We'll pay €1,388 ________ total.

Language

Talking about money

When we **talk about money**, we use *cost*, *come to* and *be* when the subject of the verb is an item. We use *spend* and *pay* when the subject is a person, a company, etc.	*How much did it* ***come to/cost*** *in total?* *How much* ***was*** *it in total?* *How much did you* ***spend/pay****?*
We can also use *cost* as a noun.	*What is the total* ***cost****?*
Informally, we often say numbers from 1,000 to 1,999 using hundreds, not thousands.	1,250: *twelve hundred and fifty/one thousand two hundred and fifty*
Decimal prices are expressed differently from other decimal numbers.	£1.50: *one pound fifty/one fifty*

6 Work in pairs. Ask and answer questions using these prompts.

1 how much/you/spend/internet connection?
2 what/be/your total spending/software/last year?
3 how much/you/pay/mobile phone service?
4 what/be/the purchase cost of your computer/in total?

Speaking **7** Work in pairs. Student A, look at the information on this page. Student B, look at the information on page 70. Follow the instructions.

TCO (total cost of ownership) is the total of all the costs of owning something.

Student A

Your IT manager has asked you and Student B to calculate the total cost of ownership (TCO) of two items over three years. You have the costs for the Sundai TB10.6 tablet and Student B has the costs for the Samiba DR750 laptop. Ask Student B about his/her information and complete the first part of the TCO calculation worksheet below. Then answer Student B's questions so that he/she can complete the second part of the worksheet.

Quotation

Thank you very much for inviting us to quote on this matter. Here is an itemised list of the prices you asked for:

• cost of Sundai TB10.6 tablet:	$499.90
• note-taking apps:	$45 per year
• other apps: total:	$160
• standard warranty:	(free) 2 years
• extended warranty (1 year):	$39.90
• online training:	$179 per person
• tech support:	free
• protective case:	$35.75

Total cost of ownership calculation worksheet

No. of years: 3

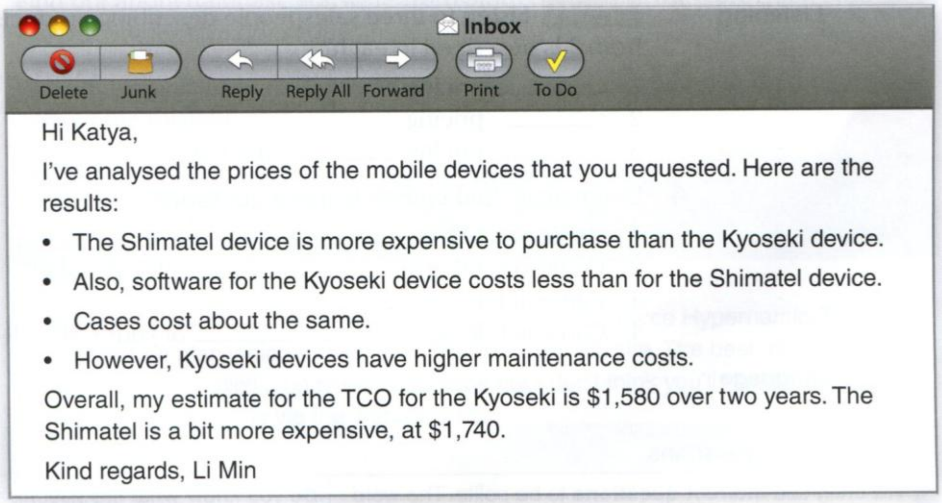
Item	*Samiba DR750*	*Sundai TB10.6*
Initial purchase cost		
Software costs		
Warranty		
Technical support costs		
Training		
Other items		
Total cost of ownership		

8 Work in pairs. Discuss the differences between the two products in 7.

The laptops cost more than the tablets to buy.

Writing **9** Read the email giving the TCO of some mobile devices and answer these questions.

1 Which sentence introduces the topic of the email?
2 Which word joins similar ideas? Which word joins different ideas?
3 Which word indicates a summary?



Hi Katya,

I've analysed the prices of the mobile devices that you requested. Here are the results:

- The Shimatel device is more expensive to purchase than the Kyoseki device.
- Also, software for the Kyoseki device costs less than for the Shimatel device.
- Cases cost about the same.
- However, Kyoseki devices have higher maintenance costs.

Overall, my estimate for the TCO for the Kyoseki is $1,580 over two years. The Shimatel is a bit more expensive, at $1,740.

Kind regards, Li Min

10 Write an email to your manager giving the TCO over three years of the products in 7. Include appropriate words to join similar ideas, to join different ideas and to indicate a summary.

Product research

Speaking 1 Work in small groups. Last time you bought something, how did you choose what to buy? For example, did you think only about price? Or other things as well? Discuss.

Reading 2 Read the web page and match the pricing models to these features. Which pricing model(s):

1 may have advertising inside the program? ________
2 includes a regular fee, e.g. monthly? ________
3 has large updates that have a price and small updates that are free? ________
4 has several different prices for new users? ________
5 makes it easier for the vendor to introduce upgrades often? ________
6 sometimes costs nothing? ________

cloud computing = software as a service (SaaS)

Common pricing models: a quick explanation

Traditional pricing

This is the pricing model most common in consumer software. If you buy software in a box from a shop, you're probably using this model. Each major version of the software costs money; minor versions are free for licence holders. When a new major version comes out, licence holders have to pay extra but usually less than for a first purchase. Users can often try out the software for free for a short trial period.

Tiered pricing

In this model there are at least two levels (or tiers) of the software product. Each level has a different price and may have a different feature set, or allow a different number of users.

Freemium pricing

This model is just like tiered pricing but the lowest level is free. Often there are a very large number of free users, who act as advertising for the company. If a free user likes the program, they might encourage their employer to use it, who will then pay for premium features.

Subscription pricing

In this the buyer pays a regular fee, usually monthly, to use the software. This includes all updates, which are pushed out to the users. The advantage is that the software company can easily bring out updates frequently. This pricing model is often associated with cloud computing.

Freeware

As its name suggests, this is free software. It might be ad-supported. The disadvantage is that ads may take up space on the screen.

Listening 3 26 Listen to three salespeople describing products. Which pricing model from 2 is described in each?

1 ________ pricing
2 ________ pricing
3 ________ pricing, ________ pricing

4 Listen again and complete these questions.

1 Could you tell me ________________?
2 Could you tell me ________________ trial version?
3 Can you tell me ________________?
4 Can you tell me ________________ of your staff will use it?

Language

Asking polite questions

We often use **indirect questions** to be polite. The word order is the same as in statements, not questions.	*Do you know what the specifications are?*
For *yes/no* questions we use *if* or *whether*.	*Can you tell me **whether** it has support for networking?*

Pronunciation **5** 27 Listen to three indirect questions and mark the intonation as rising (↗) or falling (↘) in audio script 27 on page 76. Then practise asking the questions.

Reading **6** Read the specification sheets and answer these questions.

1 Which pricing model(s) in 2 do Microforce and Jozo use?
2 How can you access support in each?
3 In how many locations can someone use a) Microforce's Free plan?
b) Jozo Premier with one licence?

Microforce Hypernamic database pricing plans

	Free plan	Standard plan	Enterprise plan
Maximum no. of users	3	10	unlimited
Cost	free (ad supported)	$10.00/ month	$25.00/ month
Trial period	n/a	15 days	15 days
Site licences	1 site	3 sites	unlimited
Support	web only	email	telephone and email
Max no. of records	5,000	20,000	10,000,000
Training	website	access to videos	1 × trainer site visit/ year

Jozo Premier database solutions pricing

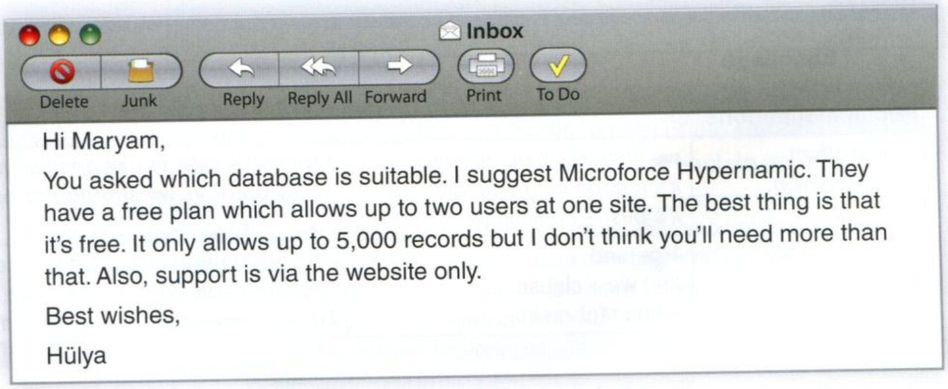
Maximum no. of users	unlimited (<100 recommended)
Cost	version 5.2: $699.00 per site; upgrade from version 3 or 4: $199.00 per site
Trial period	60 days
Support	web, telephone and email
Max no. of records	100,000,000
Training	Contact our sales rep for current prices.

Speaking **7** Work in pairs. Which of the four packages in 6 has the best features for these people? Give reasons for your answers.

- a freelance person
- a small company
- a large government department

8 Work in pairs. Look at the information in 6 again. Student A, you are a customer. Find out about database software from Student B, a software provider. Student B, answer Student A's questions.

Reading **9** Read this email from an IT consultant to the freelance person in 7. Find and correct the mistake.



Hi Maryam,

You asked which database is suitable. I suggest Microforce Hypernamic. They have a free plan which allows up to two users at one site. The best thing is that it's free. It only allows up to 5,000 records but I don't think you'll need more than that. Also, support is via the website only.

Best wishes,

Hülya

Writing **10** Write an email to the manager of the government department or the small company in 7, advising him/her which package from 6 is suitable for that department. Give reasons.

Making recommendations

Speaking 1 Work in groups. Think of a device or a software package that you have used. Would you recommend it to someone else? Why/Why not?

2 Work in groups. Read this glossary entry for *CAD*. Discuss which of the features in the box might be useful for CAD software.

CAD (Computer Aided Design): using computers to produce drawings and technical specifications during the design process, for engineers, architects and similar. It may also be used for movies.

- 2-D drawing tools
- 3-D drawing tools
- audio recording
- browser capability
- good compatibility with file formats from other software
- instant chat function
- network capabilities
- OCR

Listening 3 ▶ 28 Listen to three people talking about their companies. How big is each company?

4 Listen again and take notes on each company's CAD requirements. Then, in pairs, use your notes to decide which CAD software below is best for each company.

Side-by-side product summary: best CAD software of the year

	SuperCAD	CAD 8-8-8	CADmium Pro
Price	free (open source)	$899.95/licence (one computer)	$45/user/month
Features	★★★★	★★★★★	★★★★
File compatibility	★★★★★	★★★★★	★★★
2-D tools	✓	✓	✓
3-D tools	limited	✓	✓
Network capabilities	✗	✓	✓
User guide	✗	✓	✓
Email support	✗	✗	✓
Telephone support	✗	$1/minute	free with subscription
User forums	✓	✓	✗

Language

Recommendations

I think (that) *In my opinion,*	*we should* + bare infinitive *it's a good idea* + *to*-infinitive *it's best* + *to*-infinitive	***I think it's best to use*** *open source software.* ***In my opinion, we should use*** *open source software.*
I recommend *I'd recommend*	+ gerund *that we* + clause + noun (phrase)	***I recommend using*** *open source software.* ***I recommend that we use*** *open source software.* ***I'd recommend*** *open source software.*

Speaking 5 Work in pairs. Take turns to make recommendations to the people in 3. Use the notes you made in 4 to help you.

Writing 6 Write an email to one of the people in 3, giving your recommendations and reasons.

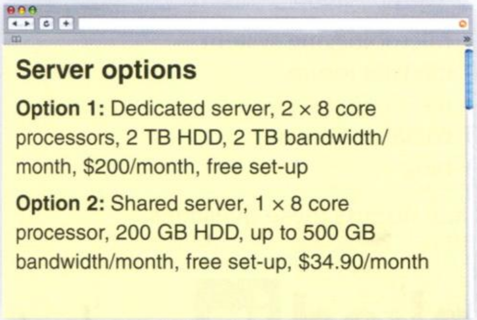
Business matters

Speaking 1 Work in groups. Think about presentations that you've seen or given. Decide on three pieces of advice about giving presentations. Share your ideas with the class.

Reading 2 Double Jam is a company that needs advice about a new website. Read their company profile and the web pages below. Which options do you think are best for the company?

CMS (content management system) = software that makes it easy to edit and manage a website

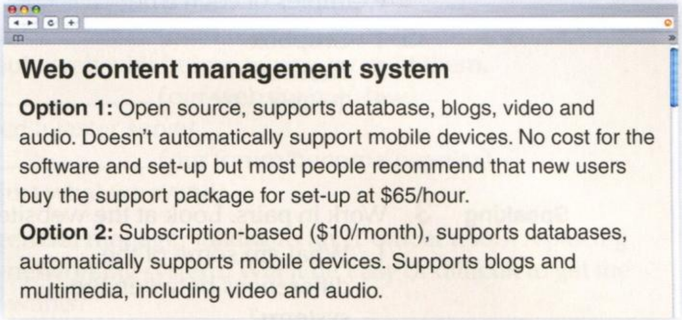
Double Jam is a medium-sized clothes company that wants a website for marketing purposes. Its clients are mostly young consumers who want lots of exciting content such as video and often use mobile devices to access the internet. They want people to do interesting things on their website, not just read it. It's important that their website is fast.



Server options

Option 1: Dedicated server, 2 × 8 core processors, 2 TB HDD, 2 TB bandwidth/month, $200/month, free set-up

Option 2: Shared server, 1 × 8 core processor, 200 GB HDD, up to 500 GB bandwidth/month, free set-up, $34.90/month



Web content management system

Option 1: Open source, supports database, blogs, video and audio. Doesn't automatically support mobile devices. No cost for the software and set-up but most people recommend that new users buy the support package for set-up at $65/hour.

Option 2: Subscription-based ($10/month), supports databases, automatically supports mobile devices. Supports blogs and multimedia, including video and audio.

Listening 3 29 Listen to an IT consultant giving a presentation to Double Jam and check your answers in 2.

4 Listen again and complete this table with the expressions the IT consultant uses to introduce different points in her presentation. Then add any similar expressions you know. Compare answers with a partner.

Part	Expressions in presentation	Your ideas
Introduction	*first, I'll give ...*	
Body		
Conclusion		

Speaking 5 Work in pairs. Your company has asked you to give advice for a client, Top Safety Consulting. Read their company profile and decide which of the server options and web CMS systems in 2 to recommend. Estimate the cost of each in the first year.

Top Safety Consulting is a medium-sized company that advises companies about site safety. The company's clients access information on many kinds of devices from desktop computers to mobile phones, but content is mostly ordinary web pages with writing and a few pictures; they want to keep costs low. They want their website to look good but it doesn't have to be exciting for younger people: this is a serious website.

6 Prepare a short presentation in which you give your recommendations and reasons. Use the expressions in 4. Then give your presentation. While listening to other presentations, note down the recommendations each speaker makes.

6 Interactions

- describe trends
- describe benefits of video conferencing
- give meanings of e-commerce concep
- process requests for training

Enterprise social media

Speaking **1** Work in pairs. How do you communicate electronically with friends and family? Which types of communication do you think are better for a) communicating information and b) being friendly?

Vocabulary **2** Match websites 1–3 to types a–e. There are two extra types. Can you give other examples of each type?

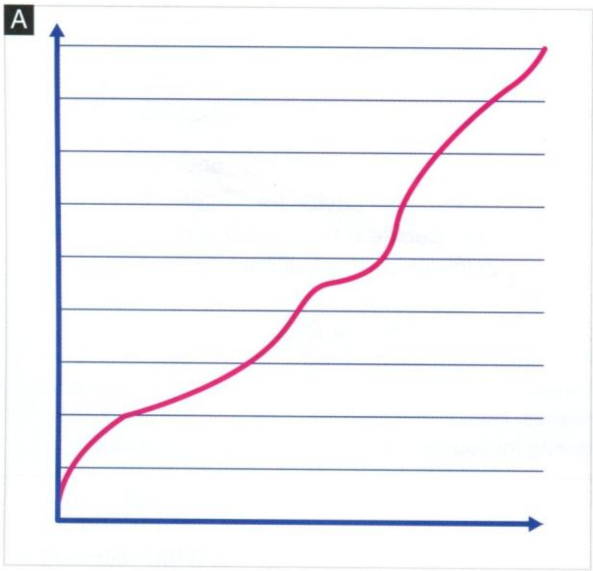
1 Dropbox
2 Facebook
3 Twitter

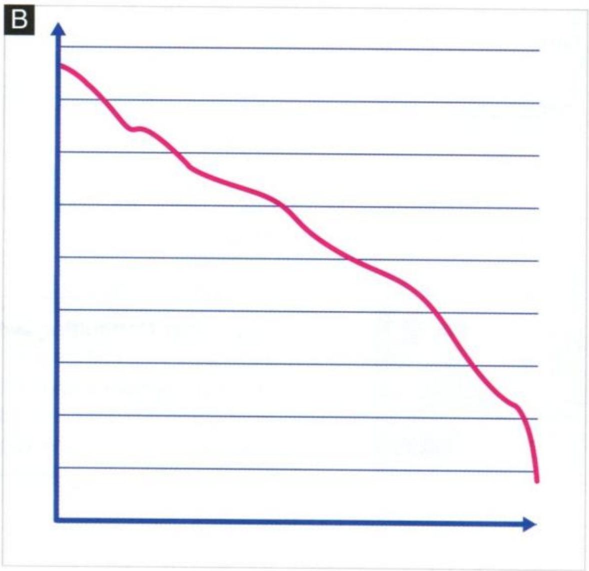
a) microblogging system
b) internet forum
c) file sharing service
d) social networking
e) blog

Speaking **3** Work in pairs. Look at the websites in 2 and discuss these questions.

1 What are some of the differences between the systems?
2 How are they used differently in a work environment from a social environment?
3 In a company, what security and privacy issues might each lead to?

Listening **4** 30 Listen to five people describing trends and match them to graphs A and B.





1 ___ 2 ___ 3 ___ 4 ___ 5 ___

Language

Describing current changes

We often use the present continuous to describe changes happening now. We can use *more and more* + noun or comparative + *and* + comparative.	*We're **having more and more visitors** in the forum.* *Smartphone applications **are getting cheaper and cheaper**.*
We often use *get* and *become* with comparative adjectives.	*Our website **is becoming/getting** more popular.*
We can also use verbs such as *increase*, *decrease*, *go up* and *go down*.	*The number of bloggers is **increasing**.*

5 Look at audio script 30 on page 77. Underline the parts of the sentences showing change.

6 Complete these short conversations about trends. Use the present continuous and comparative adjectives.

1 A: ______________________ (hard drives/get/cheap)
B: I think we should wait a bit before buying more of them.
2 A: ______________________ (our website/get/slow)
B: Maybe we need a faster server.
3 A: ______________________ (our forum/become/popular)
B: Great! That's just what we want!

Listening **7** ▶ 31 Listen to a general manager talking to an IT officer about replacing the company's social networking system. Will it be easy or difficult to get the features the manager wants?

8 Listen again. Tick ✓ the correct column to show which features the company has now and which the manager wants in the new system.

	Current system	New system
1 instant messaging		
2 forums		
3 document management system		
4 comments feature		
5 mobile phone access		
6 basic security features		
7 encryption		
8 speech-to-text capability		

instant messaging = chat

9 Listen again. What trends are mentioned? Mark these items ↗ or ↘ to show an upward or downward trend.

1 using the current system ___
2 spending time on emails ___
3 working with overseas departments ___
4 needing data access at home ___
5 importance of security ___
6 popularity of voice recognition ___

Language **10** Work in pairs. Write a sentence to show the trend for each item in 9 using language from the Language box. Then compare your answers with audio script 31 on page 77.

Speaking **11** Work in groups. Think of as many answers to these questions as you can. Use language from the Language box. Which group can give the most answers?

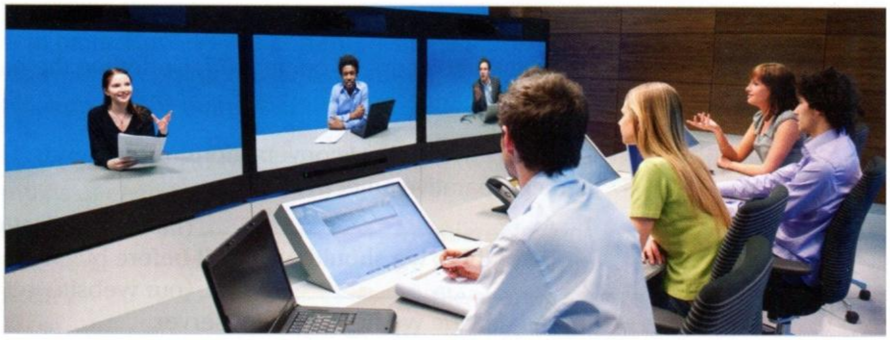
1 What are some current trends in IT?
2 In what ways can enterprise social networking systems help a company?

Video conferencing

Speaking

1 Work in pairs. Discuss these questions.

1 Which method of communicating do you prefer: face-to-face, by video or by telephone?
2 Look at the photo. Have you ever used a video conferencing set-up? If so, describe the situation.
3 What do you think are the advantages of video conferencing over face-to-face meetings?



2 Which of these items can you see in the photo? Mark the items on the photo.

cables   control panels   high-definition monitors   local participants
microphones   remote participants   speakers   video cameras

Listening

3 32 Listen to two technicians talking about video conferencing technology. Which two types of system does the woman talk about?

MCU = multipoint control unit

4 Complete these glossary definitions with the words in the box.

(data) compression   dedicated system   MCU   remote control

Glossary of video conferencing terms

1 ________: a system that is used for only one purpose, e.g. for video conferencing only, nothing else
2 ________: a device that can control the video conferencing system from a distance, without wires. It can be passed from person to person easily.
3 ________: a device that allows video conferencing systems to use more than two locations
4 ________: a way to fit audio or video into a smaller space and use less bandwidth

Language

Second conditional

We use the **second conditional** to talk about something that is not true now or is unlikely to happen in the future.	***If** we **were** a big company, we **would buy** an expensive video conferencing system.* ***If** we **got** a video conferencing system, our travel costs **could go down** a lot.*

5 Look at audio script 32 on page 77 and underline all the examples of the second conditional. Which tense do we use in the *if* clause? In the main clause?

Listening **6** 33 Listen to five people talking about video conferencing. Do they think the situation is likely or unlikely? Tick ✓ the correct column for each speaker.

	Likely	Unlikely
Speaker 1		
Speaker 2		
Speaker 3		
Speaker 4		
Speaker 5		

Speaking **7** Work in pairs. Look at audio script 32 on page 77 and complete this table. Then discuss the advantages and disadvantages of having each system.

	Dedicated video conferencing system	Videophone
How many locations of participants?		only two
How many participants in each location?		only one
Cost?		less expensive
Room		any room is OK
Equipment needed		only the videophone

If we had a videophone, we could save a lot of money. But we wouldn't be able to have meetings with lots of people.

8 Work in pairs. What would happen if you wanted a video conferencing system but didn't have these items? Complete this table. Then take turns to say complete sentences.

Item	Problem without this item
1 encryption	*wouldn't be secure*
2 warranty	
3 a high-speed internet connection	
4 an MCU	
5 training	
6 a dedicated room for the equipment	
7 data compression	

If we didn't have encryption, our video conferences wouldn't be secure.

9 Work in pairs. Student A, you are a general manager. You want a video conferencing system but want to save money. Student B, try to persuade Student A, your manager, to have one of the features in 8. Then swap roles and repeat the activity.

10 If these people could use video conferencing facilities, how would their lives be different? Discuss. Use language from the Language box.

1 a deaf person
2 a child who lives a long way from any school
3 doctors working in a small hospital a long way from a city
4 a company director who doesn't have time to visit her clients overseas

E-commerce

Speaking **1** Work in pairs or small groups. Do you buy things on the internet? Why/Why not? What are the advantages and disadvantages of internet shopping? Discuss.

Reading **2** Read this magazine article about Dalya's job. What are three parts of an e-commerce system? Which does Dalya find most difficult to set up?

shopping basket (BrE) = shopping cart (AmE)

Enter
shopping
i
@

Internet shopping: the inside story

Dalya Rahman specialises in setting up e-commerce systems. Here, she tells 'New Careers' magazine about her job.

I work with B2B (business-to-business) e-commerce systems as well as B2C (business-to-consumer) systems and integrate all the components: the user interface, the shopping basket and the payment system. The user interface is the part that shoppers see on their screens. For this, I work closely with designers to make it look good; it's important that customers enjoy using it.

When customers see an item that they want to buy, they put it in their shopping basket. To set this up, I usually integrate standard software packages with the company's website. This software uses small files that the browser puts on the user's computer, called cookies, to track the items in the basket. This stage isn't too difficult – mostly I just match up the code with the client's website.

The next step is the payment processing system. This takes the customer's information – delivery address, credit card number, etc. It processes the payment and outputs the details so that the company can send out the order. This component is more complicated: I have to integrate it into several different systems, including the company's accounting system. Fortunately, there's a special data format, EDI, that is Electronic Data Interchange, which makes this easier. EDI is standard in e-commerce systems so that other kinds of software, such as accounting systems, can accept data from it.

My job is fun because every project is different and I use my technical skills as well; a great combination!

3 Find words in the article in 2 that match these definitions.

1 put together two or more things so that they work well together (paragraph 2) ________
2 smaller parts of something bigger (paragraph 2) ________
3 computer programming instructions (paragraph 3) ________
4 taking a series of steps to do something (paragraph 4) ________
5 the place to send goods (paragraph 4) ________
6 the items that a customer wants to buy (paragraph 4) ________
7 looking after money in an organisation (paragraph 4) ________

4 Read the article in 2 again and answer these questions.

1 For which component is appearance important?
2 Which component involves integration with something else?
3 What do e-commerce websites use cookies for?
4 For which component is programming mentioned?
5 Which item involves integration with more than one other component?
6 Where does the company get delivery information from?
7 Why is EDI useful?

5 There are three acronyms in the article in 2. Underline them and their meanings.

Language

Giving meanings of technical words

To explain technical words, we can:	
• give the meaning in brackets.	*... EDI* ***(Electronic Data Interchange)*** *format ...*
• use *called* + the word(s) between commas.	*We use small data files,* ***called cookies****, to ...*
• use *be*.	*We use EDI. EDI* ***is*** *a way of sharing data between components of a ...*
• use a separate sentence.	
• use a relative clause.	*We use EDI,* ***which*** *is a way of sharing data between components of a ...*

Speaking **6** Work in pairs. Student A, look at the information on this page. Student B, look at the information on page 71. Follow the instructions.

DRM = digital right management

NFC = near field communication

Student A

1 Student B will read the definitions of some words to you. Give him/her the correct acronym or phrase from the box for each definition.

bricks and clicks DRM NFC

2 Read these definitions to Student B. He/She will give you the correct acronym or phrase for each definition. Write it in the gap.

a) a data security system which is used over the internet and other open networks ________

b) buying and selling between business and government ________

c) a real shop, not an online one ________

Listening **7** 34 Listen to a telephone conversation between a customer and a salesperson talking about a new product. What is the product? What problem does it solve?

8 Listen again and answer these questions.

1 How do online customers use the product?

2 How do customers use it in real (bricks and mortar) shops?

3 What is a further benefit for the company?

Speaking **9** Work in pairs. What is an e-wallet? Write a definition. Then compare answers with your partner. Discuss any differences and create a new definition combining your ideas. Share your ideas with the class.

10 Work in pairs. Would you be happy to use an e-wallet? Why/Why not? How secure do you think it is? Discuss.

11 Work in pairs. Write definitions for three words from the text in 2 but do not show your partner. Then read your definitions to your partner. Can he/she guess the words?

Training users

Speaking

1 Work in pairs. Discuss these questions.

1 When a company buys new technology, how important is it to train users?
2 What do you think are the advantages of e-learning over face-to-face learning?

Vocabulary

sync = synchronise/ synchronisation

2 Match words 1–8 to definitions a–h.

1 smartphone ___
2 threaded view ___
3 tagging ___
4 announcement ___
5 policies and procedures ___
6 syncing ___
7 instant messaging ___
8 archiving ___

a) documents showing standard ways of doing things in an organisation
b) adding keywords to a file (e.g. a document or photograph) to make it easier to find
c) a type of mobile phone that can also use data
d) a way of viewing emails and comments so that all messages in the same conversation are grouped together
e) saving an old file in a special place because you don't use it very often but might want to use it later
f) making the data from two places match, e.g. making two calendars match
g) an important message for many people, giving new information
h) a system for having conversations using short written messages on the internet

Listening

3 35 Listen to six employees asking for training on an enterprise social networking (ESN) system. Tick the areas/features the employers need training in.

Training needs analysis: Enterprise social networking system

Specific areas/features	Training needed	Specific areas/features	Training needed
• instant messaging	☐	• finding messages	☐
• increasing efficiency	☐	• smartphone syncing	☐
• document collaboration	☐	• threaded view	☐
• policy and procedure access	☐	• archiving of old messages	☐
• company announcements	☐	• tagging of messages, files and documents	☐

Language

Making requests

For requests, we can use polite questions such as indirect questions (e.g. *It would be great to know ..., I'd like/love to know ..., Could someone tell me ...*) or the modal verbs *can* and *could*.

It would be great to know *how syncing works.*
Could someone tell me *how to use the ESN system?*
Could *we learn about tagging?*

4 Write a polite request for training in each of these areas.

1 instant messaging
2 document collaboration features
3 document archiving
4 finding information

Speaking

5 Work in pairs. Choose one of the words in the box and roleplay a conversation requesting a training session. Then swap roles and repeat with another word.

CAD software   databases   networks   spreadsheets

Business matters

Reading 1 Look at the headings in this report. What are the main points of the report?

Current issues for BDL Limited and possible IT solutions

Introduction

Our last year has been good. The new overseas office is doing well and our B2B and B2C sales are increasing quickly. Our sales team is working hard and our four bricks and mortar shops are also doing well. However, there are some issues that we need to deal with so that we can continue to do well in the future. Some new technology might help with these.

Problems: communication and internet sales

We have found two problems that the IT Department could help us with. These are:

- Communication between our different country offices and departments in different locations isn't very efficient, especially for our international locations. We are collaborating more and more between different locations, so it's important to make this easy for people.
- Internet sales are going down. There are several reasons for this. The main one is that customers don't like using the current online shopping system. We need a system that's easier to use so that customers don't give up before they finish their transactions.

Recommendations for IT solutions

The first step should be to find out whether technology can help with these problems and, if so, how it can help. If this is successful, next we should find out about prices and features of appropriate systems.

2 Read the report in 1 and answer these questions.

1 Does the company have locations in one country or more than one?
2 What problem do they have with communication?
3 What problem do they have with e-commerce?
4 What two steps does the company want to take next?

Speaking 3 Work in pairs. Think about the technology that you talked about in this unit. Which items could help the company in 1? If the company had the item(s) now, how would things be different?

Writing 4 Look at the report in 1 and answer these questions.

1 Which features of the report clearly show the main points?
2 Which section of the report:
   a) gives the background information?
   b) gives details?
   c) talks about future actions?
3 In each section, where is the main idea: at the beginning, in the middle or at the end of the section?

5 Write a short report explaining your decisions in 3. Use these headings:

- Introduction
- Suggestions and benefits
- Recommendations for next steps

7 Development

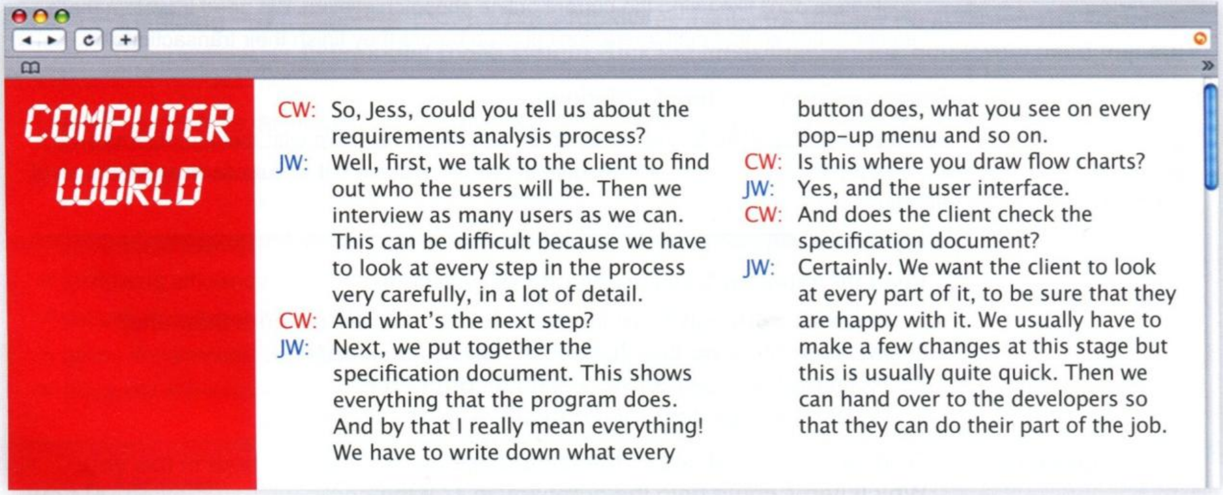
- describe software requirements
- talk about website architecture
- describe programming steps
- discuss future plans and schedules

Requirements analysis

1 Work in pairs. Put these stages of the software development process in the best order.

☐ The customer checks and approves the final version.
☐ Speak with the people who will use the new software and analyse how they will use it.
☐ Plan the project, write the specifications and prepare instructions for the programmers.
☐ Test and debug the code.
☐ Write the code.

Reading **2** Read this interview from *Computer World*, an online magazine, in which Jess Wong, a systems analyst, talks about her job. Which of the stages in 1 does she mention?



CW: So, Jess, could you tell us about the requirements analysis process?

JW: Well, first, we talk to the client to find out who the users will be. Then we interview as many users as we can. This can be difficult because we have to look at every step in the process very carefully, in a lot of detail.

CW: And what's the next step?

JW: Next, we put together the specification document. This shows everything that the program does. And by that I really mean everything! We have to write down what every button does, what you see on every pop-up menu and so on.

CW: Is this where you draw flow charts?

JW: Yes, and the user interface.

CW: And does the client check the specification document?

JW: Certainly. We want the client to look at every part of it, to be sure that they are happy with it. We usually have to make a few changes at this stage but this is usually quite quick. Then we can hand over to the developers so that they can do their part of the job.

3 Read the interview in 2 again and answer these questions.

1 Why does Jess talk to the client at the beginning of the process?
2 Why are the interviews sometimes difficult?
3 What does the specification document contain, besides writing?
4 Why does the analyst want the client to check the specification document?

Vocabulary **4** Complete these definitions with the words in the box. Use the stages in 1 and the interview in 2 to help you.

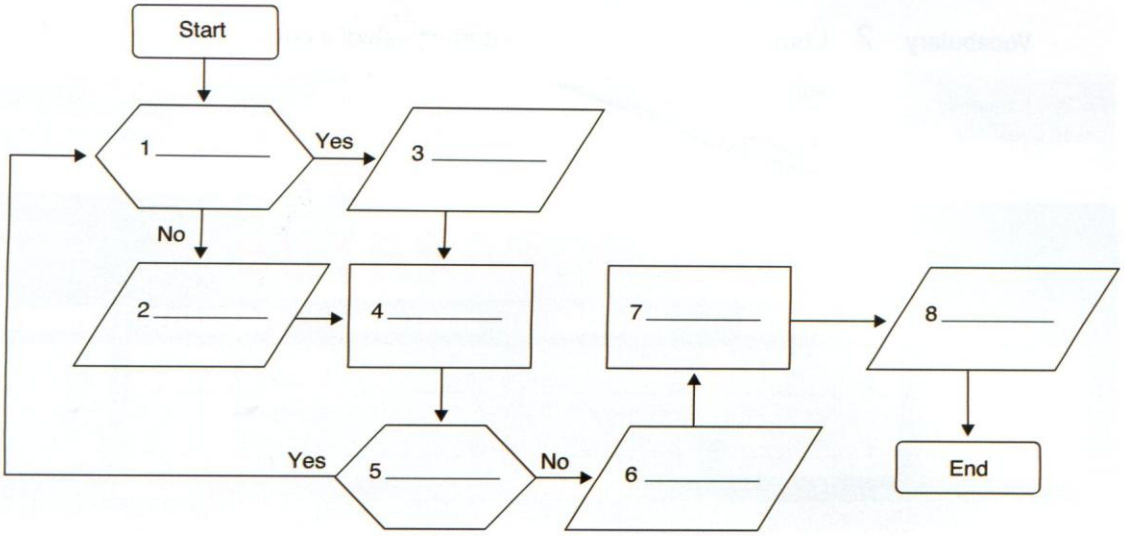
approve analyse debug detail interview

1 all the separate features and pieces of information about something ________
2 think about something very carefully, step-by-step ________
3 officially say that you are happy with something ________
4 ask someone questions formally in order to find out information ________
5 find problems in a computer program and correct them ________

Listening **5** 36 Listen to a systems analyst talking to a worker. He is preparing specifications for a pizza shop website to take orders online. Which stage from 1 is he at?

6 Complete 1–4 in this flow chart with the steps in the box. Then listen again and check your answers.

Ask which type of standard pizza.	Ask which toppings.
Customer wants standard pizza?	Write order on order sheet.



7 37 Now complete 5–8 in the flow chart in 6 with the steps in the box. Then listen to the second part of the conversation between the systems analyst and the worker and check your answers.

Ask for delivery address.	Calculate delivery time.
Customer wants another pizza?	Tell customer delivery time.

Language

Expressing user requirements

We use *should*, *have to* and *need to* to express **requirements**.	*The program **should be** easy to use.* *It **needs to be** fast but it **doesn't have to look** good.*
We can also use *want* + object + infinitive.	*The client **wants the program to run** on old versions of Windows.*

Speaking **8** Work in pairs. Use the flow chart in 6 to say what the program should do.

First, the program should find out what kind of pizza the customer wants: standard or choice of toppings.

9 Work in small groups. A shop selling fashionable clothing for young people wants an online order system. Think about the software and make a list of requirements.

The website should look interesting for young people. It should show ...

10 Compare your list from 9 with another group's list.

Website design and architecture

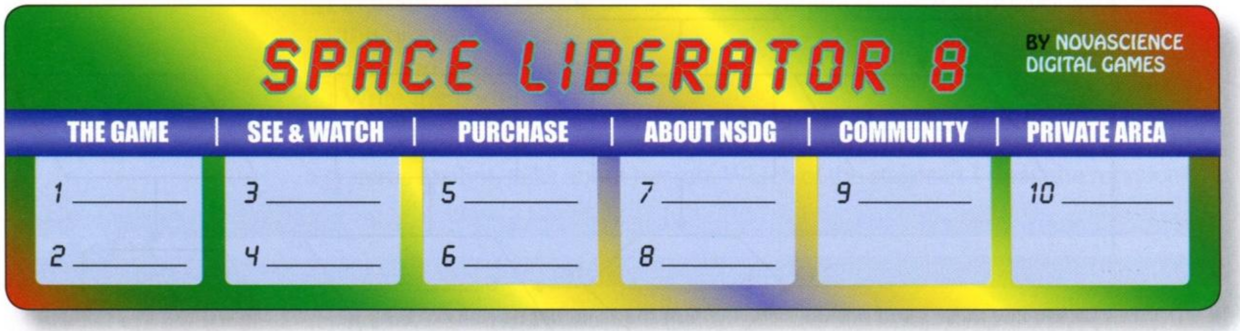
Speaking **1** Work in pairs. Think of a typical website and discuss these questions.

1 Which pages do most websites have (e.g. contact details)?
2 Which of these items, or other items, is often at the top of each page? Which is below that? What else might you find at the top of a web page?
  - contact details
  - menus
  - search
  - title
3 What makes a website easy or difficult to use? What makes it interesting? Think about how easy it is to find things, what the website looks like and what is on it (e.g. photos).

Vocabulary **2** Complete the menus on this home page of a computer game website.

FAQs = frequently asked questions

Company blog Contact us FAQs How to pay How to play
Images Login Players' forum Prices Videos



Reading **3** Read this case study about a website development project. What do you think a fan site is? Was the project successful? How do you know?

SEO = search engine optimisation

A web developer's work

Andrea Pinheiro da Silva is a web developer who is well known for the websites she has developed. Her websites have won several awards. Here, she describes a recent project.

'Recently, I worked on a project for SLFan, a fan club for the *Space Liberator* game. There were a few other sites for fans of the same game, so it was important that it looked exciting and dynamic, to get more site visits. The customer also wanted their new site to have two different areas: a public one for general content and a private one with premium content for paying fans.

We decided to use a combination of PHP, HTML5 and MySQL. PHP was chosen to keep costs down (it's open source) and for its flexibility. It's also very versatile: it integrates easily with many other website tools. We mainly used HTML5 for multimedia content but also used other systems so that the site can be viewed on many types of devices, including mobile devices. And MySQL was just right for the private area: forum posts and other private data can be stored in the MySQL database.

Speaking of mobile devices, one of the challenges was to make the site viewable on mobile phones and smaller tablets. We had to make sure that every page can be seen in mobile format. We also had to work on SEO because high search rankings were required. That involved working closely with SLFan.

The end result was a website that the customers were very pleased with. They were great people and real fun to work with!'

Vocabulary

4 Find words in the case study in 3 that match these definitions.

1 accessible by anyone (paragraph 2) ________
2 information, images, video, etc. on a website or in an application (paragraph 2) ________
3 better or more expensive than others (paragraph 2) ________
4 two or more things that are used together (paragraph 3) ________
5 that can be used in many different ways (paragraph 3) ________
6 things that are difficult to do (paragraph 4) ________
7 possible to see (paragraph 4) ________
8 position on a page of search results (paragraph 4) ________

Language

The passive

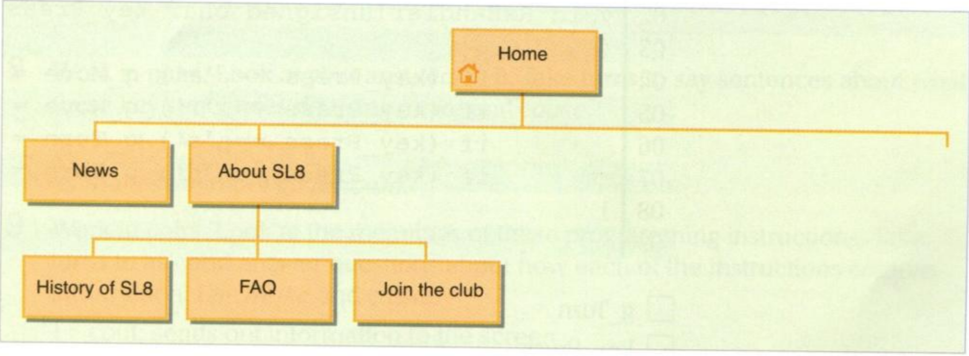
We use **the passive** when the action is more important than the agent (the person or thing doing the action), or when it isn't necessary to mention the agent at all.	*His website **is linked** to my website.* *The new website **was viewed** many times.* *Videos **can be viewed** on this site.*

5 Rewrite these sentences in the passive.

1 They found a problem.
2 The customer requires a dynamic, exciting website.
3 We used PHP for this website.
4 People can watch videos on this website.
5 People can download useful PDFs from this website.

Speaking

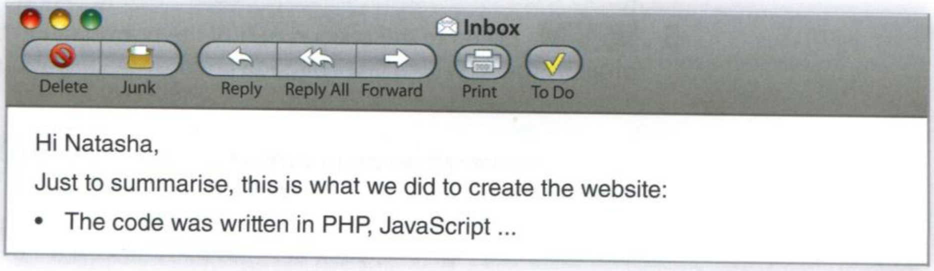
6 Look at this website navigation chart. Which pages are linked to the home page? Which page is the parent node? Which pages are the child nodes? Which are the grandchild nodes?



7 Work in pairs. Student A, look at the information on page 68. Student B, look at the information on page 71. Follow the instructions.

Writing

8 Read the text in 3 again. What was done to create the website? Complete this email to your manager. Use the passive.



Hi Natasha,

Just to summarise, this is what we did to create the website:

- The code was written in PHP, JavaScript ...

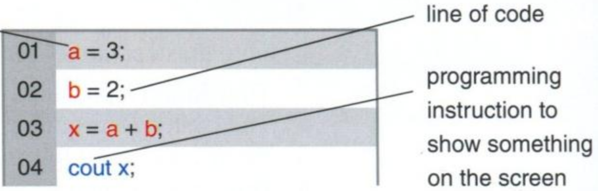
Software development

Speaking **1** Work in small groups. Have you ever seen any programming code? Would you like to be good at programming?

2 Work in pairs. Look at the section of code and the explanations and answer these questions.

1 Find an example of a constant in the code.
2 What do you think the value of *x* is, after the third instruction?

'a' is a variable. A variable is something that can change its value (which can be a number). The opposite is a constant: a constant can't change its value. For example, here the number '3' is a constant but 'a' is a variable: '3' is always '3' but 'a' can have any value an instruction gives it: it can be 1, 2, 3 or any other number. This instruction gives it the value '3', which it keeps until another instruction changes it. Variables can have any name, and sometimes variable names are quite long. For example, 'g_Turn' is a variable name.



```
01  a = 3;
02  b = 2;
03  x = a + b;
04  cout x;
```

Listening **3** 38 Listen to the first part of a conversation between two programmers talking about this code, which controls a robot using a mobile phone. Number the variables in the order they are explained.

```
01 int g_Move = 0, g_Turn = 0;
02 void RxHandler(unsigned char key_Press)
03 {
04         if (key_Press == 'a') g_Move = 1;
05         if (key_Press == 'f') g_Move = 2;
06         if (key_Press == 's') g_Turn = 1;
07         if (key_Press == 'd') g_Turn = 2;
08 }
09
```

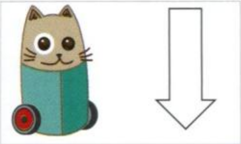
☐ g_Turn
☐ key_Press
☐ g_Move

4 Complete these sentences. Then listen again and check your answers.

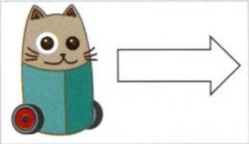
1 If *g_Move* has the value *0*, the robot ________ .
2 If *g_Turn* has the value *0*, the robot ________ .
3 If you press 'x' on the phone, *key_Press* has the value ________ .

5 39 Listen to the second part of the conversation between the two programmers. Which lines of code are they talking about?

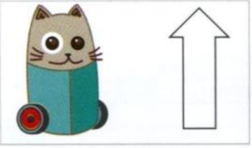
6 Listen again and label these illustrations with the keys that correspond to each direction.



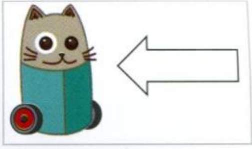
1 _________



2 _________

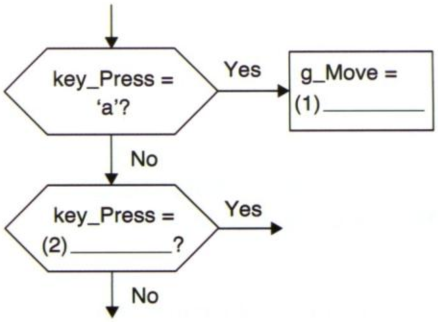


3 _________



4 _________

Speaking **7** Work in pairs. Look at the code in 3 again and complete this flow chart. Which instructions in the code in 4 do they represent?



Language

Make and cause

We use *make* + object + bare infinitive and *cause* + object + *to*-infinitive to explain how something controls something else.	*The 'f' key **makes the robot go** backwards.* *This instruction **causes the computer to print** something.*

8 Work in pairs. Look at your answers in 6. Take turns to say sentences about what these key sequences do using *make* and *cause*.

a → f → d → s

'a' makes the robot go forward.

Speaking **9** Work in pairs. Look at the meanings of these programming instructions. Take turns to ask and answer questions about how each of the instructions controls information. Use *make* and *cause*.

1 cout: sends out information to the screen
2 cin: takes input from the keyboard
3 rename: changes a filename
4 exit: stops a program
5 time: returns the number of seconds since midnight on 1 January 1970
6 remove: deletes a file

A: Which instruction makes the computer show something on the screen?
B: 'Cout'.

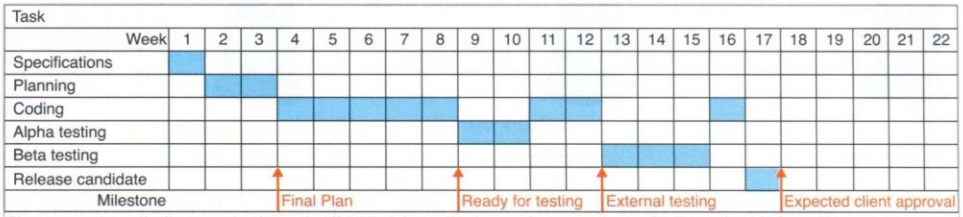
10 Work in pairs. Take turns to explain to your partner what these items do. Use *make* and *cause*.

a mouse
A mouse makes the cursor move on the screen.

1 the 'Maximise' button
2 a right click
3 a double click on a file icon
4 the 'Off' switch
5 the 'Send' button
6 the 'Save' button

Project management

Speaking 1 Look at this Gantt chart. Why might someone use a Gantt chart?



Task																						
Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Specifications	🟦																					
Planning		🟦	🟦																			
Coding				🟦	🟦	🟦	🟦	🟦			🟦	🟦				🟦						
Alpha testing									🟦	🟦												
Beta testing													🟦	🟦	🟦							
Release candidate																	🟦					
Milestone				Final Plan					Ready for testing				External testing					Expected client approval				

Please complete all milestones by the end of Friday of the week shown. For example, the final plan should be ready by 5 p.m. Friday at the end of week 3, and feedback from the alpha testing should be ready by 5 p.m. Friday at the end of week 10.

Legend
Alpha testing: in-company checks to find and remove bugs
Beta testing: checks by the clients to find any further bugs
Release candidate: final check for bugs before delivering to the client

Vocabulary 2 Complete these definitions with the words in the box. Use the Gantt chart in 1 to help you.

alpha testing beta testing coding feedback milestone release candidate

1 writing software ________
2 an important stage in a project ________
3 the first stage of testing software ________
4 the second stage of testing software ________
5 information about problems or how good something is ________
6 the final version of software, if no big bugs are found ________

Listening 3 40 Listen to a programmer and project manager discussing the schedule for the project in 1. Are they near the beginning or end of the project?

4 Listen again. What was the mistake on the Gantt chart? Correct the chart in 1.

Language

Schedules

We use *plan to*, *be scheduled to* and *be due to* in the present simple to talk about **schedules**. All three phrases are followed by an infinitive.	*We're* ***scheduled to finish*** *this project on Friday and* ***we're due to start*** *the next one on Monday.* *We* ***plan to test*** *the software next week.*
We use the present continuous if the event is part of a fixed plan and we can clearly imagine it happening.	*Alpha testing* ***is finishing*** *next week.*

5 Work in pairs. Look at audio script 40 on page 79. Underline all the examples of the language from the Language box.

Pronunciation 6 41 Listen to two short conversations and underline the stressed words in audio script 41 on page 79. Then practise the conversations with a partner.

Speaking 7 Work in pairs. Look at the Gantt chart in 2 and take turns to ask and answer questions about the schedule. Use language from the Language box.

A: What's scheduled for week 11?
B: We're due to start coding again during week 11, after the alpha testing.

8 Work in pairs. Take turns to ask and answer questions about your work or study schedule.

Business matters

Speaking 1 Work in small groups. Read this scenario and answer the questions.

> You work for a computer games company. Your manager has asked you to prepare a rough plan for a new project: a website to advertise a new computer game. It will be similar to other game websites but with a special extra feature: an online version of the game that people can try out before buying the real one. This feature will need a lot of development.

1 What is special about the new website compared with others of the same type?
2 What is likely to be the most difficult part of the new website?

2 Work in the same groups. Read the scenario in 1 again and discuss these points. Then draw a site map based on your decisions.

Decide:
1 what pages to have.
2 what type of content to include (e.g. video? any premium content? a private area?).
3 how to navigate the site: which pages should be linked to which other pages?

3 Work in the same groups. Draw a Gantt chart for the project in 1. Add the stages in the box to your chart.

alpha testing beta testing client approvals coding planning release candidate requirements analysis

Task																					
Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Milestone																					

4 Work in the same groups. Use your Gantt chart from 3 to explain your project to another group. Then compare your charts. What differences are there? What might be the reason for these differences?

Writing 5 Write a short report to your manager describing your project. You can use the information on page 51 to help you. Use these headings in your report:

- Introduction (Give background information about the project.)
- Stages in the project (Describe the stages you planned in 3.)
- Conclusion (Say when you think the project will finish.)

8 IT solutions

- talk about what you have done to identify a problem
- speculate about the causes of a fa
- propose solutions
- talk about your career in IT

Investigations

Speaking **1** Work in small groups. Discuss these questions.

1 What was the last problem you had with an electronic device? What other problems could happen?
2 When you have problems with a device, what do you do? How can you find help?

Listening **2** 42 Listen to six people describing problems. Complete the sentence about each speaker's problem with the words in the box.

connection error crashes failure
fault hanging running slowly

1 The application is ________ .
2 The computer ________ .
3 There is a ________ .
4 The computer is ________ .
5 The speaker had a disk ________ .
6 The speaker's mobile phone has a ________ .

3 Which problem in 2 means that the computer or program is still running but nothing can be typed into it?

Speaking **4** Choose one of the problems in 2 and describe it to your partner, without saying the word(s). Can your partner guess what it is?

It's when the part of your computer that stores information stops working.

Listening **5** 43 Put these sentences in the correct order. Then listen and check your answers.

☐ Ah. Have you tried restarting your computer?
☐ Could you do that? And if you still have a problem, just call me again.
☐ Does it say anything else?
1 Hi, help desk here. My name is Suki. How can I help you?
☐ Er ... no, I haven't.
☐ OK. Can you tell me exactly what happens?
☐ OK. Thanks very much. I'll do that.
☐ Sure. When I press 'Send', I get an error message saying 'This program has found a problem and needs to close'.
☐ Yes, hi. I've got a problem with my email. Whenever I try to send a message, the program crashes.
☐ Well, something about sending an error report to the software company. Oh, and an error code: it says 'Error 35A4'.

6 Look at the conversation in 5 again. What is the problem? What is the solution?

Language

Present perfect vs. past simple

We use the **present perfect** when the time period we're thinking about is not finished. We can use *yet* if we expected or wanted the action to happen before speaking but it didn't. We can use *already* if we expected the action later but it happened early.	***Have*** *you* ***restarted*** *the computer? No, I* ***haven't****.* *I* ***haven't finished*** *the programming yet.* *I****'ve already replaced*** *the hard drive.*
We use the **past simple** for completed actions in a finished time in the past.	*I* ***emailed*** *the manager last week.*

7 Look at the conversation in 5 again and underline all the examples of the present perfect and the past simple.

8 Complete these conversations with the correct present perfect or past simple form of the verbs in brackets.

1 A: It's a pity your new mobile phone isn't working. ________ (you/charged) the battery?
B: Yes, I ________ (charge) it this morning.
2 A: ________ (you/repair) the computers yesterday?
B: No, ________ .
3 A: I'm sure we'll get your computer working again. First, though, some questions: what ________ (you/try) so far?
B: Well, I ________ (restart) it five minutes ago.
4 A: ________ (you/receive) my email yet?
B: No, I ________ (not receive) anything from you today.
A: Oh. ________ (you/check) your junk mail folder?

9 Use these prompts to write questions and short answers in the present perfect or past simple.

you/restart the computer/yet/? (✗)
A: Have you restarted the computer yet? B: No, I haven't.

1 you/check the manual/yet/? (✓)
2 they/contact support/last week/? (✗)
3 you/check the cable/yet/? (✓)
4 you/test the broken computer/yesterday/? (✗)
5 you/try inserting another DVD/? (✓)

Pronunciation

10 ▶ 44 Listen to these sentences and underline the stressed syllable in each word. Then practise saying the sentences with a partner.

1 The computer's crashed three times today!
2 I've rebooted the computer.
3 Have you re-installed the software?
4 I haven't had time to finish the repair.

Speaking

11 Work in pairs. Have you ever had a problem with any of these? What happened?

cable or connection
computer
database
email client
internet connection
LAN connection
monitor
password
peripheral device

12 Work in pairs. Student A, look at the information on page 68. Student B, look at the information on page 71. Follow the instructions.

Diagnosis

Speaking **1** Work in small groups. Discuss these questions.

diagnosis = finding out exactly what the problem is with something

1 Look at the photos. What do you think is happening?
2 Have you ever called an IT help desk call centre? What happened? How was the experience?

Vocabulary **2** Find words in the form that match these definitions.

1 software for looking after help desk enquiries ________
2 record of a customer's problem or question ________
3 level ________
4 pass the problem to a higher level technician with more training ________

Gellicity Solutions: Issue tracking system

Tier 1 help desk support ticket

Name (1) ________	**Date** *24 July*	**Time** *13.40*
Software (2) ________	**Version** (3) ________	
Problem (4) ________		
Error messages (e.g. error type no.) (5) ________		
Actions taken by user (6) ________		
(7) Result	☐ Problem solved	☐ Escalate to tier 2

Listening **3** 45 Listen to a conversation between a telephone help desk technician and a customer and complete the form in 2.

4 Listen again and answer these questions.

1 What does the help desk technician think the problem might be?
2 What will happen next?
3 Which level of support do customers reach first: tier 1 or tier 2?

Language

Modals of speculation and deduction

We use the modal verbs ***may***, ***might***, and ***could*** to speculate about possible reasons and causes. In questions we use *can*, *could* or *might*.	*I'm not sure what the problem is. It* ***might*** *be a software problem.* ***Could*** *it be a hardware issue?*
We use *must* when we are sure that something is true and *can't* if we are sure that something isn't true.	*It shouldn't do that: it* ***must*** *be a fault.* *The server* ***can't*** *be busy! No one's using the website!*
We often use *be* + noun/adjective after these verbs. We can also follow them with *be* + *-ing* if it's a continuous action, or with *be* + past participle if it's a state.	*The server* ***might not be working*** *or the cable* ***might not be connected***.

5 Say what you think the problem is in these situations. Use language from the Language box.

I can't connect to the network. I wonder if the server is working?
The server might not be working.

1 My computer won't switch on. There have been many reports in the newspaper about viruses recently.
2 I can't find the file I need. I'm sure it's not on the server – I've looked everywhere!
3 Mehmet, the support technician, isn't at his desk. He often has to help people at their desks.
4 I left my mobile phone on for three days without recharging. I'm sure the battery will be flat by now. It usually only lasts a day.
5 I'm not sure what the problem is. I've checked the cables and they're all fine.
6 I can't connect to the internet. I should check whether the network cables are plugged in.

Reading **6** Complete this company troubleshooting guide. Use the words in brackets and language from the Language box.

Premium Monitors Limited

Troubleshooting guide

Problem: 'I can't see anything on my computer screen.'

1 Can the customer hear anything from the computer or see any lights on the front of it?

Yes → The computer (1) ______________ (switched on). Go to question 3.

No → The computer's power cable (2) ______________ (connected). Ask the customer to check the cable. Go to question 2.

2 Can the customer hear anything from the computer or see any lights on it now?

Yes → Go to question 3.

No → Go to question 7.

3 Can the customer see any lights on the edge of the monitor?

Yes → Go to question 5.

No → The monitor (3) ______________ (switched on). Ask the customer to press the monitor's power button. After that, go to question 4.

4 Can the customer see the monitor light now?

Yes → It (4) ______________ (a power problem). Go to question 5.

No → The monitor's cables (5) ______________ (connected). Ask the customer to check both cables at both ends. If this doesn't solve the problem, go to question 5.

5 The monitor (6) ______________ (faulty). Does the customer have a spare working monitor?

Yes → Ask the customer to try the spare monitor. Go to question 6.

No → Unknown fault. Tell the customer that we can escalate to a site technician but if the problem is with the computer, there will be a fee.

6 Does the spare monitor work?

Yes → The first monitor (7) ______________ (faulty). Replace it if it's under warranty.

No → The video card (8) ______________ (faulty). Escalate to a site technician to check the video card.

7 Does the customer have a spare working computer? Does it work with the monitor?

Yes → It's probably a faulty video card. Escalate to a site technician to replace the video card.

No → Unknown fault. Tell the customer that we can escalate to a site technician but if the problem is with the computer, there will be a fee.

Speaking **7** Work in pairs. Roleplay dealing with a monitor problem using the troubleshooting guide in 6. Take turns being a caller with a blank monitor screen and the help desk technician.

Solutions

Speaking 1 Work in pairs. Put these steps in solving an IT problem in the correct order.

☐ Decide which of the possible solutions is the most likely.
☐ If that doesn't work, try another solution.
☐ Check what the symptoms of the problem are.
☐ Continue this process until something works.
☐ Think of some possible solutions.
☐ Try the most likely solution.

Listening 2 46 Listen to two repair technicians in a computer shop talking about a computer a customer has brought in for repair. Have they solved the problem yet?

3 Listen again and tick ✓ the tests they have tried.

☐ test memory ☐ replace memory ☐ replace motherboard

Language

Proposing possible solutions

We can use ***should*** or ***shouldn't*** in first conditional sentences for results we think are likely. If we are not sure, we use ***might***.	*If we add an extra fan, the computer* ***should*** *be fine.* *If we don't add an extra fan, the computer* ***might*** *overheat.*
We can also use ***try*** + noun/-*ing* to propose solutions.	*Let's* ***try*** *an extra* ***fan/adding*** *an extra fan.*

4 Complete these conversations. Use the words in brackets and language from the Language box. Add any other words necessary.

1 A: My app hasn't updated to the latest version.
B: Your phone settings might be wrong. If you ______________________ (change/settings/app/update) soon.

2 A: My phone isn't sending or receiving data.
B: Maybe the network connections are switched off. Try ______________________ (check/network and connections settings).

3 A: My phone's running really slowly.
B: There might be some **bloatware** on it, which you probably don't need. Try ______________________ (remove/it).

4 A: I've just got a really high phone **bill**. It's too expensive!
B: You need to be very careful with some mobile phone data plans, to make sure you don't go over your **usage** limit. If you ______________________ (check/usage/regularly/you/be) OK.

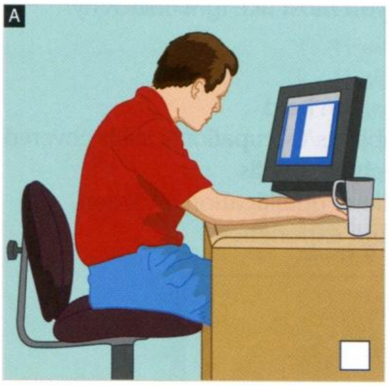
5 Complete these definitions with the words in bold in 4.

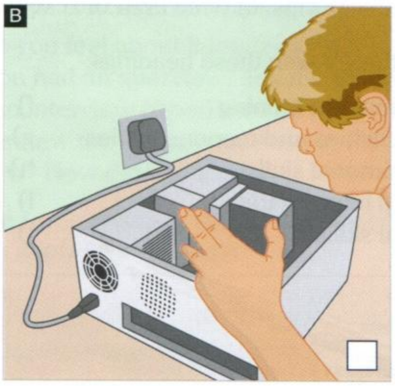
1 the amount of something that you can use ________
2 software that some computer and mobile phone companies put on their products as advertising ________
3 a document showing how much you have to pay for something ________

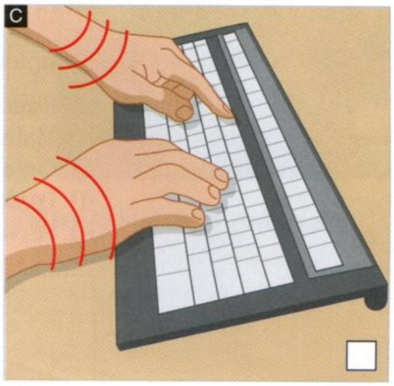
Speaking 6 Work in pairs. You are technicians discussing a problem. Follow the steps below and roleplay the situation. Then swap roles and repeat the activity.

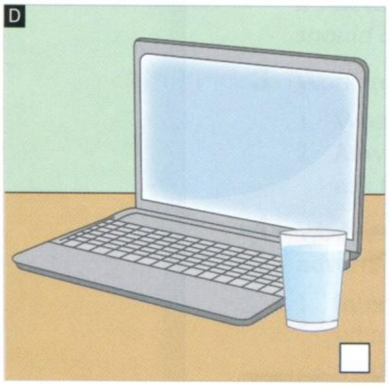
- Student A: Explain the problem. (mobile phone works but not data)
- Student B: Ask what Technician 1 has done already.
- Student A: Answer Technician 2's questions. (checked settings, checked battery level)
- Student B: Make a suggestion. (try a different network)

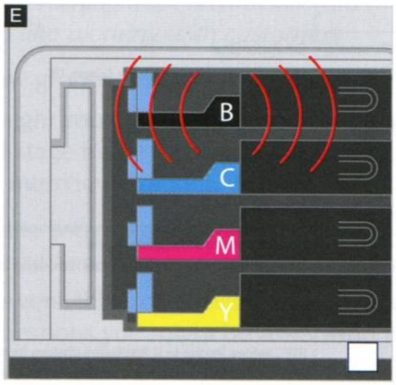
Vocabulary **7** Match illustrations A–F to dangers 1–6 in the leaflet below. Then match dangers 1–6 to the pieces of advice a–f.

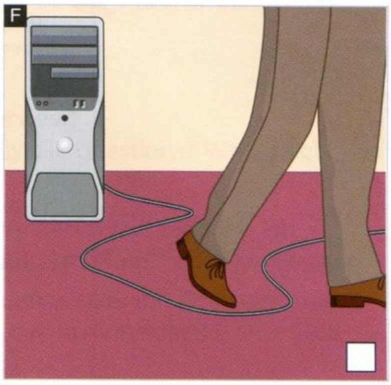












RSI = repetitive strain injury

Safety at work

Dangers ✗	Advice ✓
1 backache	a) Move the cables.
2 electric shock	b) Don't bend your back while sitting at a desk!
3 RSI	c) Let it cool down.
4 trips and falls	d) Unplug!
5 short circuit	e) Keep your wrists straight.
6 burns	f) Don't spill your drink.

Writing **8** Write a sentence for each of the illustrations in 7. Use language from the Language box on page 64.

Unplug the computer before working inside it. If you don't, you might get an electric shock.

Speaking **9** Work in pairs. Take turns to give warnings about the dangers in the illustrations in 7. Follow these steps.

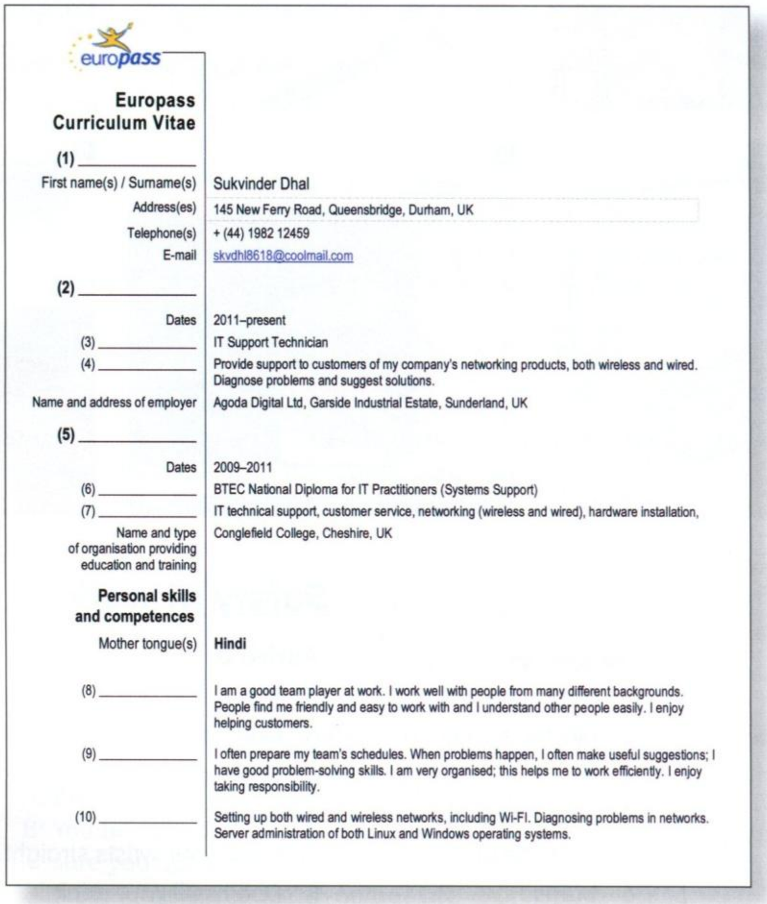
- Student A: Point out a problem to Student B.
- Student B: Ask why it's a problem.
- Student A: Explain why it's a problem.
- Student B: Show understanding and ask what to do.
- Student A: Explain how to avoid the problem.
- Student B: Thank Student A for the advice.

Your future in IT

Speaking **1** Work in small groups. In what area of IT would you most like to work? Why?

Reading **2** Complete the CV with these headings.

a) Education and training
b) Main activities and responsibilities
c) Organisational skills
d) Personal information
e) Personal skills
f) Position held
g) Subjects/Occupational skills covered
h) Technical skills
i) Title of qualification awarded
j) Work experience



Europass Curriculum Vitae	
(1) ________	
First name(s) / Surname(s)	Sukvinder Dhal
Address(es)	145 New Ferry Road, Queensbridge, Durham, UK
Telephone(s)	+ (44) 1982 12459
E-mail	skvdhl8618@coolmail.com
(2) ________	
Dates	2011–present
(3) ________	IT Support Technician
(4) ________	Provide support to customers of my company's networking products, both wireless and wired. Diagnose problems and suggest solutions.
Name and address of employer	Agoda Digital Ltd, Garside Industrial Estate, Sunderland, UK
(5) ________	
Dates	2009–2011
(6) ________	BTEC National Diploma for IT Practitioners (Systems Support)
(7) ________	IT technical support, customer service, networking (wireless and wired), hardware installation,
Name and type of organisation providing education and training	Conglefield College, Cheshire, UK
Personal skills and competences	
Mother tongue(s)	**Hindi**
(8) ________	I am a good team player at work. I work well with people from many different backgrounds. People find me friendly and easy to work with and I understand other people easily. I enjoy helping customers.
(9) ________	I often prepare my team's schedules. When problems happen, I often make useful suggestions; I have good problem-solving skills. I am very organised; this helps me to work efficiently. I enjoy taking responsibility.
(10) ________	Setting up both wired and wireless networks, including Wi-FI. Diagnosing problems in networks. Server administration of both Linux and Windows operating systems.

Speaking **3** Work in pairs. Discuss these questions.

1 What technical skills do you have? Where have you used them?
2 What personal skills do you have? In what situations have you used them?

Writing **4** Write your own CV. Use the Europass CV structure in 2.

Language

Verbs to talk about career plans

We can use ***plan*/*intend*/*hope*/*expect*** + *to*-infinitive to talk about career plans.	*I **hope to manage** my own team.* *I **expect to stay** with this company for many years.*

Speaking **5** Work in pairs. Tell your partner about your career plans. Talk about further qualifications, skills and positions.

Business matters

Speaking **1** Work in groups. Discuss these questions.

1 How do you feel about interviews?
2 Have you had an interview? Tell the group about an interview experience. What was the interview for? What happened in the interview? How did you feel?

2 Work in the same groups. Discuss the personal and technical skills you might need if you apply for these jobs.

help desk supervisor
systems administrator
project manager
systems analyst
software developer
web developer

If you work as a help desk technician, you have to be good at teamwork. You should also like working with customers.

3 Work in new groups. Discuss these questions.

1 What might you be asked about in a job interview?
2 At what stage in the interview can you usually ask questions? What might you ask the interviewer about?

4 Work in pairs. You are going to roleplay a job interview. First, read the job advertisement and choose one of the jobs to apply for. Then follow these steps.

1 Interviewers, think of questions to ask the interviewee. Interviewees, predict what questions you might be asked and prepare answers. Make sure your questions and answers include these topics:
   - experience
   - personal skills
   - technical skills
   - why the candidate wants the job
2 Roleplay the interview. Interviewees, remember to ask the interviewers some questions at the end.
3 Swap roles and repeat the activity.

APPLY NOW!

IT personnel needed

CIT Ltd is a global IT consultancy company providing customised software and hardware solutions to business clients around the world. We specialise in integrating systems to meet clients' requirements and providing software to help with this. We work with many different types of company and government department in all industries, from oil and gas to education.

We are opening a new office and need up to 40 new people with a wide variety of technical IT skills. We need people for the following positions:

- systems administrator
- web developer
- software developer
- project manager
- systems analyst
- help desk technician
- database administrator

In addition, we need supervisors and managers in all of these areas. For all positions, good personal skills are important.

Please apply with CV to jobs@CITltd.com.

Partner files: Student A

3 Data communication

Internet browsing

Speaking exercise 12 page 21

Read these web addresses to Student B. Then listen and write down the web addresses Student B reads to you.

1 www.w-3.org
2 www.aceinfo.net.au/about
3 www.basic-comp.co.jp/forum/1_754

7 Development

Website design and architecture

Speaking exercise 7 page 55

Share information with Student B to complete the website navigation chart in 6 on page 55.

Two child nodes are linked to the home page. They are called … and …

8 IT Solutions

Investigations

Speaking exercise 12 page 61

1 You are a telephone help desk technician. Use these prompts to help Student B with their problem.
   - suggestion 1: reboot computer?
   - suggestion 2: check cables?
   - solution: check cables
2 Swap roles. You have an IT problem. Use these prompts to ask Student B, a help desk technician, for help.
   - problem: computer running very slowly
   - response to suggestion 1: only email and word processor
   - response to suggestion 2: only 200 MB free

Partner files: Student B

1 Working in IT

IT workplace rules

Speaking exercise 8 page 9

1 You are a new employee in Student A's company. Listen to him/her explain some IT workplace rules.
2 Swap roles. Student A is a new employee. Explain these IT workplace rules to him/her.
  - start work by 8 a.m. ✓
  - eat at desk ✗
  - keep desk clean ✓
  - connect own devices ✗

Meetings

Speaking exercise 6 page 10

You are an IT support technician. Student A is an operations manager. Roleplay a meeting about replacing old equipment. Follow these steps:

1 Listen to Student A's self-introduction, then introduce yourself.
2 Explain the problem: seven laptops are very old; you need new ones. Make a suggestion.
3 Listen to Student A's response.
4 Explain that tablet computers can't run the company's software. Suggest purchasing some computers now and more later.
5 Listen to Student A's decision.

3 Data communication

Internet browsing

Speaking exercise 12 page 21

Listen and write down the web addresses Student A reads to you. Then read these web addresses to Student A.

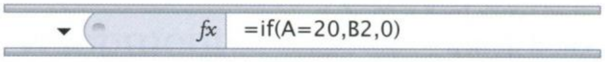
1 www.worldbox.com.sa
2 www.internode.net.de/business_intro
3 www.ug.edu/study/program.html?prog=2236

4 Administration

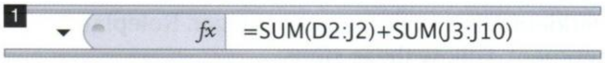
Spreadsheets and formulae

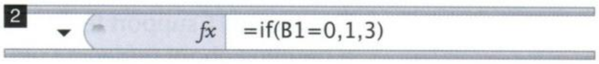
Speaking exercise 5 page 29

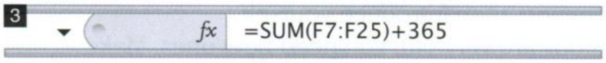
Listen and write down the formulae Student A reads to you. Then read these formulae to Student A.

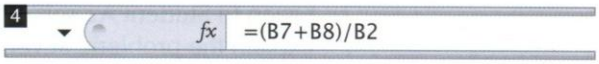

=if(A=20,B2,0)

equals if … bracket … A equals 20 … comma …
B2 comma … nought … close bracket

1

=SUM(D2:J2)+SUM(J3:J10)

2

=if(B1=0,1,3)

3

=SUM(F7:F25)+365

4

=(B7+B8)/B2

5 Choice

IT costs

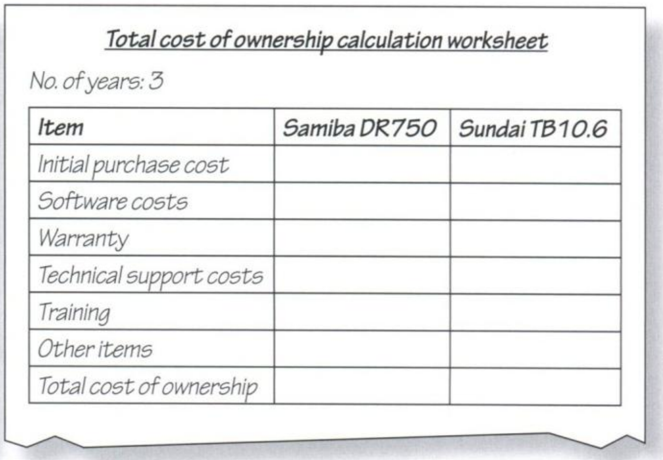
Speaking exercise 7 page 39

Your IT manager has asked you and Student A to calculate the total cost of ownership (TCO) of two items over three years. You have the costs for the Samiba DR750 laptop and Student A has the costs for the Sundai TB10.6 tablet. Answer Student A's questions so that he/she can complete the first part of the TCO calculation worksheet below. Then ask him/her about his/her information and complete the second part of the worksheet.

Quotation

We appreciate the opportunity to quote for you on the Samiba DR750 laptop computers. Prices are per computer.

• Samiba DR750 with OS installed:	$540.00
• Microsoft Office Home & Office:	$379.95
• Three year warranty: included in price	
• Training: not necessary – software is standard	
• Tech support: free	
• Spare battery:	$79.80



Total cost of ownership calculation worksheet

No. of years: 3

Item	*Samiba DR750*	*Sundai TB10.6*
Initial purchase cost		
Software costs		
Warranty		
Technical support costs		
Training		
Other items		
Total cost of ownership		

6 Interactions

E-commerce

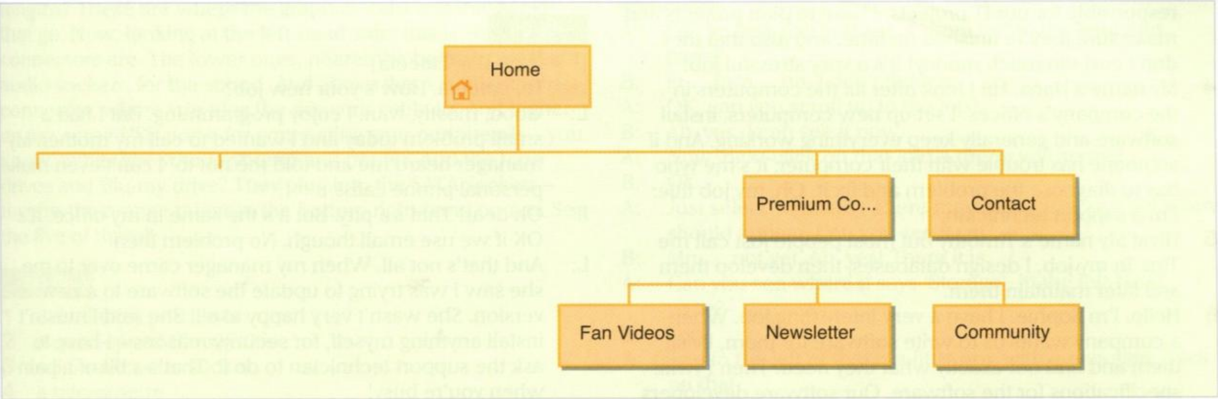
Speaking exercise 6 page 49

1 Read these definitions to Student A. He/She will give you the correct acronym or phrase for each definition. Write it in the gap.
   a) this stops people from copying music or software after they buy it ________
   b) businesses that have real world shops as well as online shops ________
   c) a way for devices to transfer information between each other when they are close or touching; can be used for low price e-commerce ________

2 Student A will read the definitions of some words to you. Give him/her the correct acronym or phrase from the box for each definition.

SSL = secure socket layer

B2G   bricks and mortar store   SSL



7 Development

Website design and architecture

Speaking exercise 7 page 55

Share information with Student A to complete this website navigation chart.
Two child nodes are linked to the home page. They are called ... and ...

8 IT Solutions

Investigations

Speaking exercise 12 page 61

1 You have an IT problem. Use these prompts to ask Student A, a help desk technician, for help.
   - problem: no internet connection
   - response to suggestion 1: ✓
   - response to suggestion 2: ✗

2 Swap roles. You are a telephone help desk technician. Use these prompts to help Student A with their problem.
   - suggestion 1: how many programs/open?
   - suggestion 2: check space on hard disk?
   - solution: need to make space on hard drive; delete things

Audio script

Unit 1 Working in IT

02

1 Hi there. I'm Maria. I have a great job. I write software for the company's computers.

2 Hi. I'm Ahmed. I supervise a team of technical support people. When our customers have a problem, we help them to get things working again.

3 Hello. Freddy here. I work for XBM Technology. I'm responsible for our IT projects. I have to plan projects and make sure they're finished on time, and also that they don't cost too much money! It's a very stressful job!

4 My name's Hana. Hi! I look after all the computers in the company's offices. I set up new computers, install software and generally keep everything working. And if someone has trouble with their computer, it's me who has to diagnose the problem and fix it. Oh, my job title: I'm a support technician.

5 Hiya! My name's Timothy but most people just call me Tim. In my job, I design databases, then develop them and later maintain them.

6 Hello. I'm Sophie. I have a very interesting job. When a company wants us to write software for them, I visit them and find out exactly what they need. Then I write specifications for the software. Our software developers then write the software to match the specifications. My job title is systems analyst.

03

A: Hi, Robert. Just to help me understand what you do, could you tell me about your daily routine?

B: Well, every day is different. But generally, I arrive at work at about 8.30, go straight to my desk and check my emails. I usually have a few of them. I reply to as many as I can but by nine, when most of the office staff arrive, my phone generally starts ringing.

A: So how do you actually help people?

B: Hmm ... it depends. I normally try to visit people at their desk but occasionally, problems come in from sales people while they are out visiting customers – problems with their laptop, for instance. Then I have to solve the problem on the phone or by remote access. This isn't very common though.

A: And what else do you do?

B: Well, from time to time, I have to attend meetings with managers and talk about our IT systems. And a few times every year, I speak to visitors who are selling equipment we might want to buy. I hardly ever go out to visit them though – just once when I went to the local computer shop for a cable because we couldn't wait for delivery ...

04

A: So what does your company do?

B: Well, we mostly develop apps for Apple and Android devices – iPhones, that kind of thing.

A: And who are your customers?

B: Mm ... they could be anyone, really. For example, many are companies, wanting an app to show their products. We also do a lot of work for educational organisations. They often want apps to help people learn something.

A: Does your company produce any hardware?

B: No, that's a very different field. All our products are software. But we do work closely with hardware manufacturers to make sure our software works well.

A: And what are your future plans?

B: Good question! We have a product launch tomorrow night. Do you want to come?

05

[I = Ivan; L = Lateefa]

I: Hi, Lateefa. How's your new job?

L: Good, mostly, Ivan. I enjoy programming. But I had a small problem today and I wanted to call my mother. My manager heard me and told me not to! I can't even make personal phone calls!

I: Oh dear! That's a pity. But it's the same in my office. It's OK if we use email though. No problem then.

L: And that's not all. When my manager came over to me, she saw I was trying to update the software to a new version. She wasn't very happy at all! She said I mustn't install anything myself, for security reasons – I have to ask the support technician to do it. That's a bit of a pain when you're busy!

I: I guess I'm lucky! I can install apps as often as I want.

L: One thing's good though.

I: What's that?

L: Occasionally, I can work from home. That means I don't see my manager! Great!

06

[J = Juliette; F = Fred; U = Ulrik]

J: Hi. Juliette here, Chief Accountant. Is everyone there?

F: Yep, Fred here, Office Manager in the Manchester office.

U: Ulrik here, also in the Manchester office. I'm the IT Support Officer.

J: OK. Let's start the meeting. I understand that your Design Department's computers are very slow and we need to find a solution. We don't have much money for IT equipment at the moment, I'm afraid. Any suggestions? Fred?

F: What about upgrading to a new version of Windows? A new operating system is much cheaper than buying new computers and should be faster.

J: Good idea. How does that sound, Ulrik?

U: Um ... well ... I'm afraid there might be a problem. Unfortunately, the computers just won't run the new Windows well. They're just too old.

F: OK. Could we buy more memory then?

U: That wouldn't work either, unfortunately. We can't put any more memory in. They're already full. I really don't think that upgrading will work.

J: That's a pity. We just don't have enough money to replace all the computers. Do you have any more ideas, Ulrik?

U: How about just replacing four computers for now, and the other four later? I think I can find some good deals. How does that sound, Fred?

F: Yes, um ... I think that will work. I think the designers will be happy.

J: OK, good, that's decided then. Ulrik, send me an email when you've found a good price. Now, let's move on to the next item on the agenda, which is the cost of the new ...

Unit 2 IT systems

07

OK, see the large thing with silver-coloured edges, near the middle – well, just above the middle? That's the CPU socket, where the CPU, the central processor unit, goes. Now, can you see the long orange and white slots to the right of the CPU? There's a white one, an orange one, then another white one and another orange one. They're for the memory – for the DIMM memory modules. Now look at the bottom of the board. See the green and orange slots of different lengths? These are where the graphics card and things like that go. Now, looking at the left-hand side: this is where the connectors are. The lower ones, nearer the bottom, are the audio sockets, for the sound. And above them is the Ethernet connector, where you plug the network cable in. And higher up are some USB ports, for connecting your peripherals – you know, things like your keyboard and printer. And the hard drives and Blu-ray drive? They plug into the SATA sockets – they're the orange things in the bottom right-hand corner. See the five of them?

08

1. a dual-core processor
2. a quad-speed Blu-ray drive
3. a 3.5-millimetre socket
4. a micrometre
5. 18 nanometres
6. a 26-kilobyte file
7. 2.4 megahertz
8. 4 terabytes

09

[A = Assistant; M = Manager]

A: The shipment just arrived!

M: Great! Let's check everything's here. OK. I've got the order form here.

A: And here's the delivery slip from the shipment.

M: Right. Let's see if they match. What's first on yours?

A: Five laptops, each with a 2.73-gigahertz dual-core processor.

M: OK, that's fine.

A: And 390-gigabyte drives.

M: Ah! We ordered 500-gigabyte drives. Oh dear! How much memory do they have?

A: Eight gigabytes.

M: That's no good. We ordered 16. How about the video card?

A: Ladeon 3850. One gigabyte.

M: Well, at least they got that one right. And the screen resolution?

A: 15.6-inch, 1920 × 1080.

M: Hmm ... Should be 1366 × 768. I won't complain about that though.

A: And four USB ports, no OS, one year warranty.

M: Yep, that bit's fine. How about the desktops? There should be ten of those?

A: Yep, that's what this says as well. And, er ... yep, ten boxes.

M: And they should be 3.4 gigahertz and with eight cores.

A: Well, they're 3.4 gigahertz all right but they seem to be quad-cores.

M: Ouch!

A: All with two-terabyte hard drives.

M: You mean each has two drives, one terabyte each?

A: Nope, they each have one drive, two terabytes.

M: Oh dear! Still not what we ordered. We really need the two separate internal drives. How about the graphics card?

A: Two gigabytes.

M: That's OK.

A: And the optical drive is a 6 × Blu-ray drive.

M: Good.

A: And there are four USB ports and a wi-fi card.

M: Well, they got the optical drive and the wi-fi card right but we asked for eight USB ports! Oh dear! I'll call Dingle straight away.

10

A: OK, so first, can you see 'Computer' in the left-hand pane?

B: Er ... mm ... no, I don't think so.

A: OK, can you scroll up to the top?

B: Ah, yes. I can see it now.

A: Now, right-click on that and a menu will appear.

B: OK.

A: Just select 'Manage'. There may be a short wait but a box should appear. Can you see it yet?

B: Mm ... not yet. Ah, yes! There it is.

A: Can you see where it says 'Storage', in the left-hand pane?

B: Yep.

A: Just to the left of that is a little box with a plus sign. Click on that.

B: Um ... yep, got it!

A: And a new icon will appear, labelled 'Disk management'. Click on that and a list of your drives will appear in the centre pane. How many are there?

B: There are two: 'Disk 0' and 'Disk 1'.

A: I see. Now, just right-click where it says 'Disk 0' and choose 'Properties' from the menu. Then, from the box that appears, choose the 'Details' tab. Then you'll see a drop-down menu.

B: Yep, got it.

A: In that drop-down menu, select 'Install date'.

B: Um ... just a moment while I look for it ...

A: It's about half way down. You'll probably have to scroll down a bit.

B: Ah, yes. Here it is.

A: OK, thanks. What date does it say?

B: 7 December 2011.

A: OK. Thanks very much.

11

We've come across a few organisations recently who have been using open source software. We think this is a big mistake. Why? Well, there are several reasons.

First, there's the issue of cost. Many people think that open source software is cheaper than proprietary software. However, this is not true. Yes, it costs less to buy to begin with but that's not the only cost. There's also the cost of training and the cost of support. A lot of proprietary software is very common, so there are many people who already know how to use it. But open source is often unfamiliar, so additional training is required. Also, open source operating system providers often make their money by charging for support; but if you buy proprietary software, support is free.

Secondly, companies that produce proprietary software can pay salaries to their software developers. This means that proprietary software is usually better, with more features, a better-looking user interface and fewer bugs.

Finally, with operating systems, there is one major disadvantage of open source systems. Most commercial software doesn't run on open source operating systems. Open source applications for word processing do exist but for others, such as design and video editing, they are not very good. For those purposes, the industry standard is to use proprietary software.

Unit 3 Data communication

12

A: Hi, is that the IT Department?

B: Yes. Can I help you?

A: Er ... yes. I'm having trouble with the new browser we're using on our PCs.

B: OK, what's the problem?

A: Well, the old one had a box for searching.

B: The search bar? Yep, this one has it too but it's the same place that you type the web address into.

A: Ah, you mean that one that starts with 'http'?

B: Yep, that's it.

A: OK, let me try it. I need to open a new tab first. I knew how to do that in the old browser but not in this one.

B: Now, see the little shape to the right of your current tab?

A: Yep.

B: Just click on that.

A: Ah, yes. I've got a new tab now.

B: OK, now just type what you are looking for into the address bar and hit 'Enter'. It'll search for you.

A: Oh, I see. OK, that works!

B: Great!

A: Thanks. That's good. I understand that now. But something else is confusing me: I can't see any menus. Where did they go?

B: Well, see that spanner symbol in the top right corner? Click on that and you'll see all the menus there.

A: Oh yes! Thank you. I don't know how I missed that!

B: Great! Is everything else OK?

A: Yes, thanks. There is one thing I do like. I can see all my bookmarks now, just below the address bar. Much easier than going to a menu for them like before!

13

A: What's the address?

B: It's *W–W–W*, dot, *D*, dash, *O*, dash, *socialwork*; all one word ...

A: Yep.

B: Dot, *gov*, dot, *A–E* ...

A: Yep.

B: Then forward slash, *schools*, underscore, two, dot, *H–T–M–L* and then a question mark, followed by *72*.

A: OK, so that's *W–W–W*, dot, *D*, dash, *O*, dash, *socialwork*, dot, *gov*, dot, *A–E*, forward slash, *schools*, underscore, two, dot, *H–T–M–L*, question mark, 72?

B: That's it!

A: Great! Thanks very much.

B: You're welcome.

14

A: Could you tell me the address?

B: Yes, sure. It's *W–W–W*, dot, *A–G–A–M–Y*, dot, *com*, slash, *search*, slash, *results*, underscore, *78*, dot, *A–S–P–X*, dash, *P*.

A: OK, so that's *W–W–W*, dot, *A–G–A–M–Y*, dot, *com*, slash, *search*, slash, *results*, underscore, *78*, dot, *A–S–P–X*, question mark, *P*?

B: Almost right. It's dash, *P* at the end, not question mark, *P*.

A: OK, thanks very much.

B: No problem.

15

A: And how are your sales team connecting to the internet nowadays when they're visiting clients?

B: Um ... they just log in in the normal way. They have dongles that plug into their laptops. With those, they can send data through the mobile phone system. Or they can use a wireless connection.

A: Hmm ... that doesn't sound very secure.

B: What do you mean? They all have passwords.

A: Well, after the data leaves the computer, there are many ways for people to read it if they try hard enough.

B: Yeah, but that's not very common, is it?

A: Actually, you'd be surprised! It's happened to many of my clients.

B: Oh dear! What can we do?

A: Well, what I recommend is a VPN – a virtual private network, which is a very secure system that's easy to use. Your team will be able to log in from anywhere.

B: Sounds great! Is it difficult to use?

A: Not at all. Your sales team will log in as normal; they can use the same dongle or wi-fi networks as now. The system will encrypt your data – in other words, it will change your data so that no one else can read it; only your company's computers. Even the government won't be able to read it! You don't have to worry about security at all!

16

A: Hi, Matt. Are the new tablets for the installation technicians ready?

B: Yep, nearly.

A: Great! How much paper do you think they'll save?

B: Lots, I think. Currently, we print out instructions and then give them to the installation technicians who go out to clients. And when the work is finished, the customer signs for the work. After all that, the technician takes all the paperwork back to the office.

A: Yep.

B: But with the tablets, we can just send the work instructions over the mobile phone network. The tablets have GPS and maps to help find the clients quickly and easily. The customer signs the electronic version and the system sends it to the customer's email address, together with an invoice. Also, the data about each job goes straight to our database.

A: Great! And do you think the tablets will improve flexibility?

B: Sure. Sometimes a customer changes their order when the technician is already out of the office. In the old system, that was a problem because the paperwork was already with the technician. But with this system, we can just update the instructions remotely.

A: That sounds like better customer service! I guess we can also communicate more easily with the technicians?

B: Yep. If they need spare parts, they just send the specifications directly. Much quicker than telephoning! And there are probably fewer mistakes that way as well. It's the same when changing their schedules. We can do that when they're out working as well.

A: Sounds great!

B: There's one thing they don't like though: we've blocked access to social networking sites and video streaming.
A: Well, we don't want them using those at work now, do we?

Unit 4 Administration

17

A: OK, so here's the price calculations worksheet. You can probably see what it does. We wrote it to add these three values: £2.17, £9.45 and £2.99. So, see, if we add those three values, we get a total of £14.61. OK?
B: Yep, that's clear.
A: Now, see that total, the £14.61? That's in cell B6.
B: Ah, because it's in the cell where column B meets row 6.
A: That's right, you've got it. Now, if we click on cell B6, we can see the formula in it here, right next to where it says *fx*. Notice the equals sign. All formulae have to start with an equals sign. Then, after that, is the function, which, in this case, is *sum*. Now, this function just adds up the values in the cells.
B: OK, I see. It says, 'equals sum, bracket, B3, colon, B5, close bracket'. What does *B3 colon B5* mean?
A: That just tells it which values to look up. It means cells B3, B5 and everything in between in the same column.
B: I see. So it adds up the values in B3, B4 and B5, to get the £14.61.
A: Yep, that's right.

18

1 Can you tell me what's wrong? I typed in the formula from your instructions but I just get an error message.
2 I can't find the spreadsheet! I definitely saved it in my main folder!
3 Yesterday I designed a spreadsheet to work out last month's sales figures. However, it just doesn't work!
4 I typed a date into this cell but it shows me a number instead.

19

Oh, yes, I was going to walk you through our client database. It's quite simple and it has the usual objects – tables, forms and reports. Now, here's the table for the client companies. It looks like a spreadsheet, doesn't it? Each record in the table is like a row on a spreadsheet. It has several fields – like cells in a spreadsheet. This one has the customer ID and information about the person who we contact at the company: given name, family name, job title, email address, you know, things like that. We give each customer a customer ID so that each record is unique – everyone has a different customer ID. Because it's unique, we can use it as the primary key.

Now, um ... there's another table here, the table for orders. We give each order a unique order number – that becomes the primary key for that table. And we have fields for item, number of items ordered, cost and so on.

Next, we have the forms, which make it easy to put information into a table. This one's for adding a new customer or updating customers' details.

And we have a few reports already prepared for printing. Here's one of them, the yearly report for total sales. We can also retrieve a record, of course, if we just want to look at one record. And if we want to combine information from more than one table, we can query the database. Is that making sense? Any questions so far?

20

A: Hey, Kevin. How's everything been?
B: Pretty good, I think. No major problems.
A: How did the upgrade to the accounting software go?
B: Quite smoothly, actually. We deployed it OK. I think most people didn't notice!
A: And the backups?
B: They're all running smoothly. In the Design Department, one of the computers had a disk crash, so I put in a new one and recovered the data from backup. That was fine. It was up and running again in a couple of hours.
A: And the new staff members?
B: All good. I set their permissions on the system and showed them around the network.
A: And the steps we were going to take to improve security?
B: Yep, the marketing team now have read-only access to the accounts data. And I locked them out of some areas completely.
A: And did you check the logs?
B: Well, I did but there was something that looked a bit strange. Let's check that out later?
A: Sure. And were there any other problems?
B: Just the usual small things – I had to reset a couple of passwords that people forgot and sort out a problem with someone who thought his password wasn't working. The usual thing – he'd just left his 'Caps Lock' on!
A: Great! Let's hope today goes as smoothly!

21

1 Dalya, before you close the database, could you email me a report on last month's sales?
2 After partitioning the hard drive, could you run a memory check?
3 Yoshi, check your schedule before you re-install the operating system; it can take over an hour. And you'll have to stay with it – it'll ask you to do several things while it's installing.
4 After I get access to your machine, you'll see the cursor moving around the screen. Don't worry – it's just me checking a few things.
5 Just one point about our company rules: before remote accessing anyone's computer, you should always ask them if it's OK.

22

A: Hi, Peter. Could I have a quick word?
B: Sure.
A: I'm having a bit of trouble with that new NAS device. Everything was fine with it yesterday. But this morning the accountant was trying to save a spreadsheet to it and she got an error message. So I checked it and, yes, I just couldn't connect to it from anywhere.
B: Oh dear! Any ideas?
A: Well, there's no problem with the network – I tested that a few minutes ago – so I'm confused; Perhaps there's a problem with the network cable?
B: That might be it. Let's take a look.

Unit 5 Choice

23

1 Dedicated hosting is more secure than shared hosting.
2 The Basic plan gives you more bandwidth than the Superior plan.
3 Websites run faster on dedicated servers than on shared servers.

4 Of the three, the Basic plan has the least powerful processor.

24

A: Hi, how's it going? Did you find a hosting service that we can move our website to?
B: Yes, I'll give you the details later but, basically, the company with the best deals has three options and I think we'll find one that fits our needs. And if we don't, they can customise if we give them some specifications.
A: Sounds good. How about the prices?
B: Well, the set-up fee is the same for all plans: $200. And the monthly charges go from $200 to 500.
A: OK, $200 dollars isn't bad but 500 is a bit high. We're not a big company. But let's look at the technical details. Is there enough storage for the information about all the music we sell on our website? We have nearly a terabyte of data there, I think.
B: Yep, we should be able to get every item that we sell onto the website.
A: And is there enough bandwidth for all of our customers? We had over 10,000 last month.
B: Yep, I think we're currently using around two terabytes a month or more. Their plans cover that amount.
A: And what about processing power?
B: Well, we don't need the servers to do a lot of processing – they just need to cope with lots of visits to the site.
A: OK, sounds good. Let's have a look at the details.

25

Well, it cost €1,200 to buy but then we spent €45 on some memory cards. It broke when someone dropped it, so we had to buy something to protect it. So that was €35 for a case. We also pay €4.50 a month for the photo sharing website so that clients can see the photos. So that's €1,200 plus 45 plus 35, which comes to 1,280. Then, for the photo sharing site, it's 4.50 per month for 12 months – 12 times €4.50 is an extra 54 per year. So, assuming its lifetime is two years, we'll pay €1,388 in total. Divide that by the two years and we get €694 per year. And that doesn't include any repairs ...

26

1 A: So, could you tell me how much it costs?
B: Sure. We have a free trial version which you can use for 30 days and you don't need to pay anything. During that time you can use all the features. But to use it after that, a licence costs £799.95 and that allows an unlimited number of users. I should let you know that we are bringing out a new version early next year but you'll be able to upgrade for only a small charge.

2 A: Could you tell me if there's a trial version?
B: There isn't, but we can do even better than that. We have a version that is free forever! It's limited to one user and won't work on networks but hundreds of thousands of users already have it and they're all happy with it. If you would like the network-enabled version and multi-user features, we can work out a special price for you as you're such a good customer!

3 A: Can you tell me what the price is?
B: Definitely. We have plans to suit all sizes of company. Can you tell me how many of your staff will use it?
A: Um ... around ten or so.
B: OK, you're in luck! Our lowest pricing tier allows up to eight, so that means you'll be on the second price tier, which is £79 per month. For that, you get unlimited updates and up to 15 users. And when your business grows, it's easy to upgrade to the next tier.

27

1 Can you tell me which pricing model you prefer?
2 Could you let me know which email client you use?
3 Could you tell me how often you use the internet?

28

1 I'm a graphic designer. I own my own small company and work by myself in a small office. I design sales and marketing material for other companies. Until now, I haven't done any three-dimensional design, though 3D may be useful in the future. Because I'm a one-person business, I can't spend a lot of money. I can usually work out how to use software by myself, so training isn't a problem. However, if I have a problem and I need support, I'll need it quickly because my clients don't like waiting for me. I don't want to finish projects late because of software problems!

2 We're a small company with seven architects, and 14 workers in total. We specialise in small projects and use IT for two things. The first is to help with the design process – actually designing the buildings – and the second is to show clients what their buildings will look like at different times during the day and at night. Our workers like using technology but they're very busy and don't have a lot of time to learn new software. We also don't have a lot of money to spend at the moment.

3 We are a medium-sized toy company with several offices throughout the country. Our Design Department, here in Manchester, has 27 people. We need a CAD system to speed up the design process, and because buyers want to know what new toys look like. We also need to be able to output data to the manufacturing division, to program the machines used for making toys. In the past we used several different CAD packages, so the new system needs to be compatible with files from the old system. We're happy to spend a lot of money if it's a good product.

29

Good morning, everyone. As you know, I'm going to talk about my company's recommendations for our new website. In this talk, first, I'll give our web server recommendations. Then I'll give our recommendations for a content management system.

Let's look at web server requirements first. Your website isn't very big, so you don't need to spend lots of money on a powerful server. Also, I don't think you need dedicated hosting; it can be quite expensive. I recommend the shared hosting option for these reasons. It provides 200 gigabytes of disk space and 500 gigabytes of bandwidth. This should be fine for your needs. You'll need a database of people who register on your site but this should be OK on a shared server.

As for the web content management system, the CMS, my company looked at two options: an open source option and a proprietary, subscription-based system. I know that you need a low-cost solution. The open source option is cheaper than the subscription plan but unfortunately, I don't think it will meet your needs. For one thing, it doesn't automatically support mobile phones, with their small screens. However, the subscription-based site will change pages to mobile phone size automatically. This will be useful for the future.

So, in conclusion, I recommend the shared server. I also recommend purchasing the subscription-based CMS to look after your website.

Unit 6 Interactions

30

1 Our website is getting more and more visits. We'll need more bandwidth soon.
2 My colleague gave me some good news. Laptops are getting cheaper! I'll buy one soon.
3 The number of companies using a social networking system is increasing.
4 The number of visits to our website is going down. This isn't good. We need to look at this.
5 More and more staff are asking for mobile access in order to work from home.

31

A: So, I think it's time to update our enterprise social networking system. I think we need a few more features – not just the chat and forums in our current system. And our staff are using the current one less and less nowadays. I'll tell you what we want – could you try to find something for us?

B: Yes, sure. No problem.

A: Great. Now for one thing, our staff are spending more time than before with emails. We need to help them be more productive with their time. One thing they ask for is to be able to access documents easily.

B: Actually, we have document management in our current system. It's not very easy to use, though, and I don't think many people know about it.

A: Ah, we need to tell people then! But can we add comments next to each document? Then people wouldn't have to send so many emails and everyone who uses the documents would be able to see the comments. We're doing more and more work with overseas departments nowadays, so this would be very useful.

B: Sure, we can get that. Comment features are normal in most new systems now.

A: And more people are working from home, so they need to access information there. Also, people need access while they are visiting customers.

B: Most systems have Android and Mac iOS clients for mobile phones nowadays, so that should be OK.

A: And security is becoming more and more important all the time. Can you make sure the new system is secure?

B: Yep, I can do that. We have some security features at the moment but they're not very good. We should get better ones: most current systems support encryption, for example.

A: And it would be great to be able to 'talk' to systems – you know, give them voice commands, voice recognition. Then they should be easier to use. That feature seems to be getting popular.

B: You mean speech-to-text capability? Sure, I'll look out for a system that has that. Or we could just use speech recognition software.

32

A: So, tell me what you've found out about video conferencing systems. What is there?

B: Well, there are two kinds: one kind is a dedicated system and the other is a desktop system. Um ... dedicated systems usually have their special room with its own hardware – I mean, the room would have a set of high-definition monitors, a video camera for each participant with remote controls and things like that.

A: I see. And the other kind?

B: Desktop systems are much simpler – we can use an ordinary PC, add some hardware and that's it. But the quality usually isn't as good.

A: Sounds more flexible though.

B: Yes, and cheaper as well.

A: Do we need anything else?

B: Well, an MCU might be useful.

A: What's that?

B: A multipoint control unit. With it, we can hold a video conference between three different locations – or more than three.

A: That sounds useful! If we had one of those now, we could connect to our Tokyo, Dubai and Paris offices! Now, how about bandwidth? Do these systems use a lot of bandwidth? I guess high-definition video would use a lot.

B: Yes, that can be a problem. But most systems use compression, which means they use a lot less bandwidth. Compression techniques are getting better all the time, so that's very helpful.

A: OK. Thanks very much for explaining all that! If we had a video conferencing system, we would save in other areas. Let's have a look at a few systems and compare costs, and get one as soon as possible.

33

1 If we buy a video conferencing system, we'll save a lot of money on travel costs. The boss will be happy with that!
2 If we rented a video conferencing room, it would be much cheaper than buying one but we'd still have to travel to go to it.
3 If we bought a video conferencing solution, we'd have to build another room at the back of our premises! That would be very expensive!
4 If we buy a video conferencing system, we'll have to think carefully about security.
5 If we upgraded our system to high-definition, we'd have to get a much faster internet connection. And it would increase the bandwidth!

34

A: Hi, I heard that you're upgrading your e-commerce system. We've got a great e-wallet system that I think you should integrate. It's getting really popular now for B2C systems!

B: Oh, what's that?

A: It's a system that speeds up e-commerce for your customers. Customers can use it in two ways. One is with online shopping. You know how normal e-commerce systems can be slow to use when customers have to type in lots of information – credit card numbers, delivery address, that kind of thing? It's the main reason for people not liking online shopping. Some people even give up before they finish the process and don't buy anything!

B: Yes.

A: Well, if they use our e-wallet system, it's much easier. Customers just type in their information once and we keep it in our system. That includes their credit card information. Then, when they want to buy something from you, they just log on from your website and type in a password. The system sends all their information to you so that you can take their payment. Because it's faster, you get more customers finishing their transactions and actually buying things! And, even better, it easily sends data straight to your accounting system! And of course it's very secure. We use high level SSL security.

B: And you mentioned another use?

A: Yes. You still have some real, bricks and mortar stores, don't you?

B: Sure.

A: Well, your customers who still like face-to-face shopping can also use the e-wallet because it works on mobile phones. Your customers just pass their mobile phones over the sensor when they want to pay, type in a password and that's it! Really simple! It uses NFC – that's near field communication – to record the payment electronically. No need to sign anything or use paper. Customers love it and it makes life easier for your accounting staff as well.

35

1 It would be great to know more about the ESN system. I think it would be really helpful for collaboration with other members of the team, especially when we're working with the same documents. We're often in different places. At the moment I can only use the instant messaging system. Oh! I've accessed the section about special deals for employees. That's useful!

2 I don't have any problems with the chat – it's easy to use. And I find it easy to find company information such as policies and procedures. But could we have some training on archiving messages so that we can find them again later? It would be very useful to know about this. Does this involve tagging them with keywords?

3 I would really like to know how to use everything better! They told me the ESN system would help me to work more efficiently but that isn't happening. I'm probably not using it properly.

4 I've just bought a new smartphone and I heard that you can use the ESN system on phones. Could someone tell me how to set it up? It would be great if I could see the same information on my mobile phone and my computer. I'm out of the office frequently, so I would use this feature a lot if I understood it.

5 My problem with this system, and with email as well, actually, is that I can never find old messages. I'd love to know how to do that.

6 The other day I saw a colleague's messages. They were all grouped together. I mean, all the emails in a conversation were next to each other so you could read them just like a conversation. I'd like to know how to do that.

Unit 7 Development

36

A: And as you know, we're just putting together the online pizza order system, so I'd like to ask you a few questions. I understand that you take telephone orders from customers now?

B: Yes, that's right.

A: Good. Could you tell me the steps you go through when you take the order? We'll use the same steps on the website.

B: Sure, no problem. Well, first of all, I usually ask whether they want one of our standard pizzas – you know, like a Margherita with cheese and tomato.

A: And if they don't?

B: Well, then they can choose their own toppings. We just ask them what toppings they want.

A: Then?

B: We write it on the order sheet.

A: OK. I see. And if they want a standard pizza?

B: Then I just ask them which one they want.

A: And you write that down on the order sheet, of course?

B: Yep, that's right.

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B: And next we ask if they would like another pizza.

A: OK.

B: And if they do, we just repeat the process – ask them the same questions again.

A: And if they don't?

B: Er ... then we ask for the delivery address. Oh, and we tell them approximately when we will deliver it.

A: How do you work that out?

B: Well, usually I just look at how busy the staff are and how many orders have come in, and make a guess from that.

A: I see. Hmm ... we'll have to work out a way for the software to calculate that. OK, that's great information. Thanks very much. And then, what do you do next?

38

A: Now, to begin with, there are two main variables, called *g_Move* and *g_Turn*. The first one, *g_Move*, tells the robot which way to go: back, forward or stay still. If *g_Move* is zero, the robot doesn't move.

B: OK.

A: The second variable, *g_Turn*, tells it to turn left, turn right or not to turn.

B: I see. So, if *g_Turn* is zero, it doesn't turn?

A: That's right. Now, look at the first line of the code, here. It sets *g_Move* and *g_Turn* to zero.

B: Telling it not to move and not to turn?

A: That's right.

B: I see. And the next line?

A: See this variable here, *key_Press*? This has the value of the key pressed on the phone. So, if you press 'a' on the phone, for example, *key_Press* has the value *a*.

B: And if I press the 'x' key on the phone, *key_Press* takes the value *x*?

A: Yep, you've got it.

39

A: Now, let's look at the *if* statements. See the four of them here?

B: Yep.

A: Now, the first one looks at *key_Press*. If *key_Press* is 'a', then *g_Move* becomes 1.

B: In other words, pressing 'a' on the mobile phone means that *g_Move* takes the value of 1?

A: That's correct. And later in the program, we'll see that if *g_Move* is 1, the robot moves forwards a step.

B: I see! So, looking at the next line, if you press 'f' on the phone, *g_Move* becomes 2 and the robot moves forwards 2 steps?

A: Well, the first bit's right, yes. *G_Move* becomes 2. But 2 actually makes the robot move back a step.

B: Mm ... I see. So, for the next one, if you press 's', I can see that *g_Turn* becomes 1 ... but does that make the robot turn right or left?

A: It turns left.

B: So, pressing 'd' makes it turn right.

A: That's correct.

40

A: OK, let's have a quick look at the Gantt chart. What's our schedule?

B: Well, the systems analysts are finishing their tasks at the end of week 3, so your team is scheduled to start coding in week 4. Then the second milestone, being ready for alpha testing, is due in week 9.

A: So ... we have five weeks to do the coding?

B: Yep, that's right. And then the alpha testing is due to finish at the end of week 10, so you're scheduled to deal with the feedback from that in week 11.

A: And we have two weeks to do that … and then, according to the chart, we start again in week 16, after the alpha testing. Hmm ... we only have a week after the beta testing? That doesn't sound very long!

B: You're right. That's rather short. I think there's a mistake; the beta testing should only last two weeks, not three. So you should have two weeks to deal with the feedback. I'll change the chart. Two weeks for beta testing and two weeks after that for you to do the debugging.

A: OK. That's better. Thanks very much!

B: That's OK. We should still be able to finish the project before week 18.

41

1 A: When are we due to finish?
B: Tomorrow, I think.

2 A: What's your schedule next week?
B: Well, I'm starting a new project on Monday!

Unit 8 IT Solutions

42

1 I'm getting really fed up. When I try to save my work, nothing happens! The window goes grey and I can't type anything. I think the application is hanging.

2 I've got a problem with my computer. After using it for a few hours, it just crashes. It gives me an error message and I have to restart it.

3 My computer won't connect to the internet. The browser window just says 'Connection error: unable to connect to the internet'.

4 My computer is running really slowly this morning. It takes a minute or two just to open a document in the word processor!

5 I had a really bad morning. I lost a lot of time because of a big problem with my hard drive. It failed completely. The technician had to come to replace it. It's a good thing everything was backed up.

6 I bought a new mobile phone yesterday but when I got it home, it didn't work at all. I tried everything – recharging the battery, reading the instructions ... It must be faulty.

43

A: Hi, help desk here. My name is Suki. How can I help you?

B: Yes, hi. I've got a problem with my email. Whenever I try to send a message, the program crashes.

A: OK. Can you tell me exactly what happens?

B: Sure. When I press 'Send', I get an error message saying 'This program has found a problem and needs to close'.

A: Does it say anything else?

B: Well, something about sending an error report to the software company. Oh, and an error code: it says 'Error 35A4'.

A: Ah. Have you tried restarting the computer?

B: Er ... no, I haven't.

A: Could you do that? And if you still have a problem, just call me again.

B: OK. Thanks very much. I'll do that.

44

1 The computer's crashed three times today!
2 I've rebooted the computer.
3 Have you re-installed the software?
4 I haven't had time to finish the repair.

45

A: Hi, can I start with your name, please?

B: It's Marten Schwarz. That's M-A-R-T-E-N, Marten, S-C-H-W-A-R-Z, Schwarz.

A: Thanks, Marten. You're speaking to Sarah Boyd today. How can I help you?

B: Well, we bought a copy of your accounting software but we're having problems installing it.

A: Oh dear! I'm sorry to hear that. That's Account Office, isn't it? Which version?

B: Version 7.

A: Thanks. So you're having problems installing it. Can you take me step by step through what you did?

B: Sure. I downloaded it from your website and double clicked on the icon in Windows Explorer. A window appeared and I followed the instructions, clicking through the steps. But just on the last stage, there was an error message.

A: Right. And what did the error message say?

B: Just 'Error type 3'. I've got no idea what that means!

A: OK. Have you tried downloading it again and trying again to install it?

B: Yep, I did that twice and got the same error message each time.

A: OK, there might be a missing file on your computer. I'll escalate your ticket to Tier 2 support. That means that a software engineer will call you back within 24 hours. I'm sure he or she will be able to solve the problem very quickly.

B: OK, thanks for your help. I'll wait for that call.

46

A: I've got a rather difficult problem here. This computer keeps switching off by itself but I can't work out what's causing the problem.

B: Have you tested the memory?

A: Yes, the memory test was fine.

B: OK. Have you tried replacing the old memory with new memory?

A: Yes, I've tried that as well but it hasn't helped at all, unfortunately!

B: How about the power supply?

A: Well, I've tried putting in a new one but the same problem still happens.

B: Mm ... the problem must be the motherboard. If we replace that, it should be OK.

A: OK. Let's do that.

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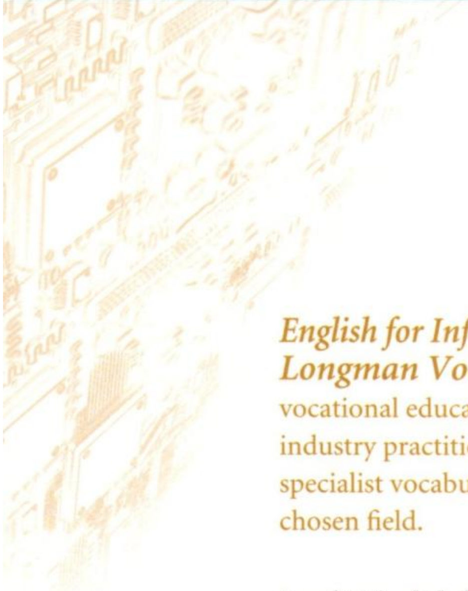

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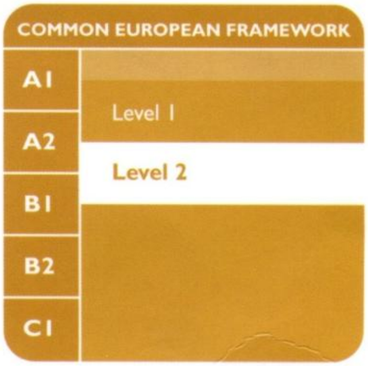

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